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THE Journal of Home Economics

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ANNIE GODFREY DEWEY

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THE

Journal of Home Economics

ANNIE GODFREY DEWEY

FEBRUARY 11, 1850–AUGUST 3, 1922

Annie Godfrey Dewey was born in Milford, Mass., February 11, 1850. Her father, Benjamin Davenport Godfrey, was the leading citizen. He established there the first shoe factory in the world that used modern labor-saving machinery. He was a deeply religious man, was interested in and gave liberally of time and money to every cause that promised to make the world better. Her mother was Anne Roberts of an old Philadelphia family. After graduation from the Milford High School she went to Gannett Institute in Boston, then a girls' school, and then to Vassar. She left there after her junior year to share in opening the college beautiful, Wellesley, where she started and built up its famous college library. She was one of the founders of the first International Library Congress, held in Philadelphia in 1876. The next year she was one of the 22 American librarians who went to London for the first International Library Congress held out of America. On that trip, both ways, Justin Winsor the great librarian of Harvard usually chose the deck chair next to hers and on her return induced her to resign from Wellesley to join his staff at Harvard. A year from the night when the library delegation left the white chalk cliffs of Dover behind, the London delegates gathered again for her wedding at Milford to Melvil Dewey, founder and secretary of the American Library Association.

For the next few years she was chief contributor to Poole's great Index of Periodical Literature, brought out by coöperation of a score of leading American libraries. On that monumental book she did all the indexing for Harvard University, Boston Atheneum, and Worcester Public Library. For five years she shared the pioneer work of building the American Library Association, its official organ, the Library Journal, the Library Bureau, the American Metric Bureau for introducing the international weights and measures, and the Spelling Reform Association.

In May, 1883, Mr. Dewey was called to Columbia University as director of the first library school which he and Mrs. Dewey had planned

as part of the great library movement. For six years at Columbia her home was on the seventh floor of the Dalhousie between Fifth and Sixth Avenues adjoining Central Park, and here on September 3, 1887, her only child, Godfrey, was born. During these years she attended many lectures at Columbia, kept up coöperation in all her husband's work, and also always had other lines of her own where she was modestly but most effectively using her unusual talents for the common good. In her Dalhousie apartment from time to time were found among her friends and guests some of the most eminent men and women of their generation. She had lived, as much as at home, with her cousin, the wife of Governor William Claflin. Mrs. Claflin's country house in Newtonville, and her beautiful city home on Mt. Vernon Street, Boston, were often said to have as guests more eminent authors and leaders than any other home in America. There Mrs. Dewey made many friends, among them Whittier, Longfellow, Lowell, Henry Ward Beecher, Elizabeth Stuart Phelps, Lucy Larcom, Harriet Beecher Stowe, General W. T. Sherman, Vice-president Henry Wilson, President and Mrs. R. B. Hayes, Alice Freeman Palmer, and hundreds of others.

January 1, 1889 she went to Albany where her husband had been elected director of the State Library. Even more than before, her home at 315 Madison Avenue with its large gardens was a center for university, college, and high school men and women, librarians, and others interested in higher education. Her records, a fruit of her methodical habits, show over 600 extra meals a year to such friends who had come from many states and nations, and who always found a warm welcome to her home. She was president of the Women's Auxiliary for the diocese of Albany; so the Bishop consecrated her home with the special service used for rectories. She started various movements, among them a committee on city sanitation which she headed. When, after a serious fever, her physician insisted that she must resign all outside work except one, he found that she was president, secretary, chairman, or moving spirit of over a dozen national, state, city, or diocesan organizations.

From her marriage, October 19, 1878, she had shared with her husband the dream of creating a coöperative family club under ideal conditions, and to this and her work for home economics she gave the rest of her life, though she often wrote, usually under some pen name, articles for magazines and leading papers to advance the causes in which she was especially interested.

Each summer she and her husband chose a different vacation trip, making a careful study of the best location for the club of which they dreamed. She saw Lake Placid first in 1890. In 1893 she came back and bought the Pines where she lived in 1894, making ready to start the club in Bonnie Blink, now Lakeside, in 1895. When the club trustees after the second year, discouraged by almost insurmountable difficulties, decided to abandon the plan, Mrs. Dewey offered to sell her private property and pay the losses, saying that she knew the plan was right and that right must always succeed in the end. It was her faith, courage, and her own small private fortune that saved the club from death, and it was her faith and skillful hard work that during the Club's twenty-eight years has been the chief factor in molding its peculiar character. Her husband has always said that their marriage and all their work had been an absolutely equal partnership. Her name was always as good as his at any bank or on any document. While to most people she was little known because of her reticence and modesty, those on the inside soon learned that a dynamo with unusual power was hidden in the modest little woman in white. People with abundant money can hire experts and buy choice things, but she had the problem of producing a club home and giving it an atmosphere of refinement and good taste without exceeding her very limited income.

She was preëminently frank, and in all her life never hesitated to speak the whole truth as she saw it, however unpopular it might be at the time. She was an early militant advocate of cremation, eugenics, birth control, prohibition, woman suffrage, federation of Christian churches, League of Nations, and many similar movements. In spite of her modesty, national leaders soon learned to seek the help of her clear mind and unusual ability. She was one of the small group that called the first International Congress for Race Betterment at Battle Creek. She was interested with Professor Irving Fisher of Yale in developing the Life Extension Institute, and other movements for lengthening life by abolishing needless disease. She often said she was an apostle of euthenics, or the science of right living, and when charged with being an optimist always replied that she was a meliorist, or one who was working always for something better, which is the first step toward the best.

In 1900 she invited about 30 of the leading authorities on the scientific management of the home to come as her guests for a week at the Club. The discussions were so profitable that they returned year after year.

With the active coöperation of Professor Ellen H. Richards of the Massachusetts Institute of Technology, they made the nomenclature, classification, and courses of study from kindergarten to university, and their work was accepted as authoritative. At the World's Fair in Buffalo, the president of the National Home Economics Association said twice in public addresses, "We have our national and state associations, but we all look to the Lake Placid Conference for our guidance and inspiration." The influence of that work has spread to every state and to many foreign countries. When the Association grew to 2,000 members and Placid could no longer hold it, it gave public recognition of her pioneer work by carrying her name as honorary president.

Similarly she started the Institution Economics and the Group Living Conferences, with their far-reaching influences for good. She prepared and printed pamphlets of directions for waitresses, chambermaids, and other club employees, which have been accepted as authoritative and used in national schools for training. These are all gathered together into a small booklet suggestive for all interested in the serving of large groups.

In Wellesley she was known as the best horsewoman on the faculty and she kept up her riding until stopped by a defective heart only recently. In winter, even in her seventy-third year, dressed usually in pure white, she got her exercise in quiet skating on the Club rinks. George Ade greatly enjoyed a picture and rhyme which she sent him.

There is an old lady at Placid Club Lake
Who wished to wear nickers and wanted to skate,
She pushes a chair with a grand-child or two
While those disapproving, shake heads and cry "Shoo!
"She ought to be sitting,
"Hands folded, or knitting,
"Awaiting the summons to Saint Peter's gate."

There are some who believe a woman may skate
When three score and ten and a very kind fate,
With freedom and ease gained by nickers and skiis,
Have given her health to do just what she please.

Mrs. Dewey was naturally deeply religious, but absolutely free from any bigotry or sectarianism. She was brought up a Congregationalist, but the beauty of the Episcopal services decided her to be confirmed by Bishop Potter in St. James Church. Much as she loved the old historic church she had little patience with the narrowness exhibited by some of its adherents. To her the Christian life and not the creed was the supreme test of worthiness.

Her chief work in the twenty-eight years at Placid was planning all new buildings which she drew to exact scale, locating to the last inch each door and window, leaving to the architect only to compute the strains, determine size of timbers, and with her to decide on graceful roof lines. The last house she built, White Birches, was her home for two years. Many hundreds of teachers, librarians, and others working for the higher things of life will remember her sweet and helpful hospitality. She said the only justification for a beautiful home was that it should serve others largely. The weekly Tuesday afternoon "at homes" are to be continued as she wished.

Some fifteen years ago the Battle Creek Sanitarium experts told her that she had but a few months to live because of hardening of the arteries. She never had the slightest fear of death, but said to her husband, "I will be sorry to leave you alone, but if I can't work longer here I should like to get my next job started over there." With wonderful care of her health she has done a great work after the experts said her active life was finished. She has kept quietly at work at home though dropping outside duties. When the oculist told her she could no longer use her eyes in reading or writing shorthand, she smiled, and a few days later was reading with her fingers the raised type for the blind. Books were sent her from the State Library where she had helped to found the State Library for the Blind. She sent for an expert

typist and learned the touch system; so until the day of her death she used her typewriter freely. On her last day, August second, she had been to a symphony concert and psychology lecture, came home very happy, and retired as usual. At 1 a.m. she called her nurse as she had often before because of the pressure about the heart, took the usual remedy and insisted that she would soon be asleep and refused to allow the Club physician, who for years has been watching her closely, to be called. An hour later the nurse called the physician but when he came into the room she was unconscious, and at 2:30 the heart that had been so brave for almost seventy-three years ceased to beat. She had been writing and left unfinished in the machine some verses, and her last remark to the nurse was quietly, "If anything should happen give Mr. Dewey the verses in my typewriter."

Let there be no sad tho'ts when my soul takes its flight
O'er mountains distant, beyond starry spaces bright;
Time passes and much change doth bring to mortal man;
Life's filld with pleasure, pain, sickness and helth, the span
Of years alloted to fulfill our hearts' desires
Hav past, much unfulfilld to which the soul aspires.
Birth, marriage, deth, the great triumvirate of life,
Hav past and with them ends the long and varied strife
To which men weakly yield, or brave and strong, resist,
And bild the caracter which makes the soul persist.
This universe reveals its wonders, great and small,
Thru telescope and microscope; we know that all
Has been so orderd by a Will Divine, All-wise,
Who sees the end desired, unknown to human eyes,
And sets each life a task, a lesson which when lernd
Reveals the next step

And these were a brief but characteristic summing up of her wonderful life. A little tired, she had stopped in the middle of a sentence to take "the next step."

Hers was a wonderful life. In all these years when she was so frank and fearless in criticizing what was wrong and in battling for the right, her frankness was so mixed with justice and gentleness that she never made an enemy or a hostile critic, however much they might differ from her views. She commanded the respect of all who knew her, and the deep admiration and love of all who knew her well.

The simple service at her White Birches home was conducted by Rev. C. H. Parkhurst, a warm friend, who all summer had read an hour with her every morning. The Club chimes were played beautifully during the whole service and until the cars left the grounds on their way to

the Troy Crematorium. At 9:40 the big fire bell tolled ten strokes, the chimes stopped, and all the Club stood still for three minutes of reverent recognition of the passing of a great soul.

On August 31 there was a formal memorial concert. The program was made up of her special favorites, and began with Beethoven's Allegretto from the Seventh, which the Boston Symphony always plays for the great dead. Schubert's Unfinished Symphony, counted by musicians among the very greatest compositions, was played next. Then the wonderful Preludes by Liszt, telling in music the story of a life, and the program printed Lamartine's words from his Meditation which Liszt translated into music: "Life is only a succession of preludes to that unknown song whose first solumn note is sounded by Death. Love is the first morning glow of every heart, but fate cuts through its joys with the storms of life, whose rude breath destroys its illusions. The wounded soul seeks for rest and relief in the seclusion of pastoral life, but not for long can man find contentment in this inactivity and when the trumpet sounds he plunges anew into the battle of life, where in the post of greatest danger he arrives again at full consciousness of himself and his strength."

At the close of a great cathedral service comes the Recessional, and at the close of a great life what more fitting than De Koven's setting of Kipling's undying verses? These followed by Gounod's Gallia were sung by the staff chorus and soloists accompanied by the orchestra.

The entire audience then joined in the last visible symbol of their respect. Slowly every hand with a drooping white handkerchief was stretched up and held aloft like a field of lilies, while Dr. Parkhurst gave the benediction. Then slowly falling, ended the "drooping of the lilies" in memory of our beloved dead.

It had been arranged years ago that there should be held for her the Iroquois condolence by the lodge fires in the forest. The Iroquois believed that the spirit lingered for a time near its earthly home until it was formally released by the condolence rite, when, like a bird released from its prison, it mounted upward to the sky world.

Down the long Onondaga trail lighted only by pilot fires, 120 costumed Indians filed noiselessly, except for the mournful beats of the water drum accompanied by turtle-shell rattles. They gathered at their six national lodges. In the center was the council square of great trees cut in half for benches and banked with pine. Within this were the embers of the first burned out in symbol of a life ended. After

Winona, the red-robed fire-keeper, brought a brand from her sacred fire and rekindled the long journey fire, fifty of the closest friends who had been standing with bowed heads outside the council square took their places on the long benches. The Great White Chief made the condolence talk and called for the gifts for Senneyusta's long journey fire to light her toward the sky world. When the White Chief said, "Farewell, spirit of Senneyusta, on earth we loved you; the blue sky is clear, the way is upward, He-who-made-us calls," the Faithkeeper brushed away the branches that had confined a white homing dove which with the "farewell" circled upward toward the distant stars.

Thus in Brookwood forest, under the stars, lighted only by the lodge fires of the six nations, this solemn ritual was held, the stately dignified, and wonderfully impressive condolence of the world's greatest aborigines in the form they have used for centuries when they light the long journey fire for a great leader who has started on his last trail to the sky world beyond the stars.

IN HIGH SCHOOL DAYS

IN MEMORIAM

FAITH

I have no rendezvous with death,
No, after all the storm and strife,
Far out, beyond the dim shore line,
I have a rendezvous with life.
Death I shall meet upon my way;
His face, his touch, they are not new:
But just beyond his barricade
Life waits to keep our rendezvous.
What though my sight and hearing fail,
And men shall say that I have died?
Though they may never know they lied—
The sights and sounds they cannot know
While earth's dull round they humbly plod.
Living, as I have never lived,
I shall keep rendezvous with God.

—*Cora G. Day.*

How truly the thread that ran through the workaday world of Mrs. Annie Dewey is expressed by:

"Work!
Thank God for the pride of it,
For the beautiful, conquering tide of it—
Oh, what is so good as the urge of it,
And what is so glad as the surge of it."

It was markedly impressed upon me during those hours of intimate contact which I was privileged to have with her for several years. Her great hope, even in one of her last letters to me, was "to be allowed to *work*, to be in action to the end."

Richer than I dreamed then, do I count now those hours with her at the Club, together working, planning, and building toward a coming Lake Placid Conference. As I glanced through the door, left ajar into her own sitting-room, there she sat—always in white, an embodiment of loveliness, her pads and pencils ready on a low table near by, the room flooded with sunshine. It was there that Mrs. Dewey, so gentle, so tender, gave to me a side of her nature often kept from the world. Presumably we were to formulate programs for the conference; in reality, the versatility of her power showed itself in a marvelous manner —a master-soul!

In those quiet hours, I sensed anew many of her outstanding qualities —at the front, perhaps, her orderly mind. As she thought, so she

made notes—clean-cut, clear, concise. Her memos, always taken in personal shorthand and "shipshape," were on little pads with pencils attached, fitted into attractive reticule pockets, specially made to match each gown. Going from department to department on the Club grounds, her constructive criticisms, carefully organized later, showed those very powers of discernment and judgment that characterize a really able administrator. In our talks together, she would turn to her files, the same orderliness prevailing, and in a surprisingly short time, would bring the material sought, evidence again of the painstaking care that had been taken to organize clippings and notes. Her thought, often expressed, was that a good executive takes time to classify usuable material, realizing that a mass of unusable things clutter the mind and hinder the worker to a degree greater than he dreams.

This thoroughness was carried over into her reading and study, for she often remarked: "It seems less wasteful of time to select very thoughtfully a few books, worthwhile ones, read and digest them, and then pigeonhole notes from them for further use. They then become a part of you." She seemed to have untold resources, with great ability to quote passages, and an infinite fund of information, due in large part, one might conclude, to this saner, more leisurely habit of reading.

Always one thinks of her as an able organizer. As an executive she certainly sounded the keynote for her various departments. She had the ideal; she knew the team work needed, that

". . . . the strength of the Pack is the Wolf, and the strength of the Wolf is the Pack."

With little apparent effort she obtained the best from her staff and employees, such was the secret she had of excellent organization, and often administrators have quoted her as saying: "A good organization is one whose work is so well arranged that the machinery does not creak; one scarcely senses the absence of the director." One always felt growth and progress in her work, for her efforts were unending, seeking experiments that were being tried in institutions often at great distance from the Club, arranging interviews with captains of industry or experts in finance, getting a new impetus from these wider contacts. Wholesome discontent with any result less good than the very best possible roused her to constant and wholehearted study.

Our hours together in the big out-of-doors were a revelation to me, as we rode "under the broad blue lift of the sky," or walked in that

mountain country she loved so dearly where were

> "the pines against the white north sky,
> Very beautiful and still, and bending over
> Their sharp black heads against the quiet sky.
> And there was peace in them."

What meaning she attached to it all her power confirmed, for she was the personification of poise and quiet force. It was in the country she belonged, for after a visit to the city she invariably wrote that she felt cramped and stunted there and longed to get back to "her hills" where she could express herself. "So let me hold my way, by nothing halted, high on my hills—dear hills that know me."

One found oneself studying her and her faith in Nature, and began asking the "hows": how one could obtain that fortitude which she possessed, or that courage which Galsworthy terms "but a word, and yet, of words, the only sentinel of permanence;" how she caught such abandon, that carefree spirit; how came that most charitable feeling of hers toward all mankind. There was a hint, perhaps, in such a thought as that expressed in "Reciprocity":

> "I do not think that skies and meadows are
> Moral, or that the fixture of a star
> Comes of a quiet spirit, or that trees
> Have wisdom in their windless silences.
> Yet these are things invested in my mood
> With constancy, and peace, and fortitude,
> That in my troubled season I can cry
> Upon the wide composure of the sky,
> And envy fields, and wish that I might be
> As little daunted as a star or tree."

A woman of vision she was, outstanding in the high principles that characterized all her work. She talked little, boasted never, but one knew and felt the ideals she possessed. It was always a reaching out, an eagerness to feel that her contribution to life counted, a desire to say:

> "I want, be it with all my soul attest,
> Nothing that will not ultimately tell
> To the eternal good of mankind."

'Tis only now and then, we grant, that one touches souls like these, with the result that, because of the dynamic power we sense in them, we are urged on to higher and still higher goals.

EMMA H. GUNTHER.

"Our beloved leader, Mrs. Dewey has gone." This was the message that came to the General Session of the Home Economics Conference in Corvallis.

After the first shock and regret there came to my mind the sweet memory of the Lake Placid Conference days; the meetings of the small company; the drives about the beautiful country; the walks along the wooded hills; and over it all and through it all, the generous hospitality of Mr. and Mrs. Dewey who made these meetings possible, who gave so unselfishly of their time and thought. Those who participated in the early Lake Placid Conferences knew they were unique in the people, the place, and the inspiration they gave,—so much of idealism and so much of the practical combined. Flights of fancy could easily be indulged in, in the midst of such surroundings, but Mrs. Dewey was working hard to translate ideals into practical results that should be evident in the daily life of the Lake Placid Club. She had the ability to detach herself from her own problems and to look at them with the eye of an outsider, to see the viewpoint of the worker; and, because of this ability and her first-hand information of the problems involved, she was a most valued and valuable member of the group. The members of the institutional section in particular knew how eager and willing she was to try new ideas; how many she contributed herself. The passing of that courageous, loyal spirit means to the Home Economics Association the loss of a wise, helpful leader and a sense of personal loss to those who participated in the conferences of those early days.

ISABEL BEVIER.

There comes before me vividly at this moment the picture of Mrs. Dewey as I first saw her at Lake Placid, welcoming a group of new arrivals who had come to attend one of the earliest of those conferences for which Lake Placid later became noted. Many of us were strangers to Mrs. Dewey, but how friendly and sincere was her quiet greeting, how instantly we were made to feel ourselves "at home," and with what deepening sense of appreciation did we note the thoughtful provision for our comfort and well-being which constantly surrounded us.

As one of those who many times afterward was again welcomed, received again that peculiarly generous and considerate hospitality, and shared in some little measure the home life she somehow managed to build around her even in the midst of strenuous activities and much responsibility, I carry an indebtedness which there has never been any

way of fittingly acknowledging, and a warmth of gratitude which it is a grief to think was not better expressed.

The support which Mrs. Dewey gave to the home economics movement in its infancy was of a rarely valuable and practical kind. In offering, year after year, the hospitality of the Club, she provided a home and meeting-place for the young association which was in many respects unique, and some of those earlier meetings with the little group of pioneers at the helm, Mrs. Richards, Mrs. Abel, Miss Kinne, Miss Ravenhill, afford memories never to be forgotten. Mrs. Dewey's devotion to the home economics movement was unfaltering. Her work might be interrupted by ill-health, but when able to resume it, one always found her with interest as keen and fresh as ever, eager to give to the very limits of her strength and time.

But in thinking of her, I find myself slipping away from anything that she did to what she was; unselfish in rare degree, seeking "not her own," generous and considerate in all ways, gentle in manner and frail in body, but strong in spirit and in self-control—a woman of real beauty, of character, living a quiet unostentatious life of service to her fellows.

M. ADELAIDE NUTTING.

EXCERPTS

Editor's note: Always alert in keeping abreast of essentials in administration, Mrs. Dewey devoted herself to a very earnest and concentrated study of scientific management in all its phases, when it was first presented in industry. She showed the keenest interest in this topic and endeavored to make practical application of it with her workers. She also was in active sympathy with the extension movement in education. We quote excerpts from two of her articles.

MAN POWER, ORGANIZATION, AND REWARDS[1]

With men as with machines, unless every need and law is lived up to, they will refuse to work efficiently, often refuse to work at all. Therefore the first essential which makes possible the development of this power, in whatever form, is health—physical, mental, and moral—which depends on heredity, training, and environment. By intensive agriculture, by perfecting seed and enriching soil, man has succeeded in raising five times as many potatoes per acre as the average for certain states and ten times as many as the average for the United States. * * * This germ of power, which exists in every human being, may be cultivated with even greater results. Its native soil is the home and on the living conditions and habits of life formed there depends the fuller development of this power which controls all other forces and is our most valuable possession.

It is in the development of character, in habits of industry, truth, and sincerity, in that mental and spiritual energy which enables man to harness the forces of nature and to control them, to master his own passions and weakness, to guide, instruct and lead others, that his highest power can be attained.

[1] Presented at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913. Printed in *The Journal of Home Economics*, Vol. V, No. 5, December, 1913.

Each human being, each individual motor, is governed by his will, his ego or spiritual keynote, which sets a limit to his powers and is the ultimate measure of his capacity. It is this invisible quality for which we most need a measure, for it is the mainspring of human action which gives the power to conquer difficulties, to use obstacles as stepping-stones, to hold to ideals. Some day science will doubtless give us this unit, perhaps in a form as simple as the thumb print which may identify the criminal or the pulsations of the heart which may prove whether the witness speaks truth or falsehood.

Scientific management, in its newer ethical application, does not seek to drive men beyond the point of physical endurance. It aims simply to eliminate waste in time, materials, and human energy, and to increase output by developing interest, industry, and honest effort which carries its own reward in greater happiness and prosperity. Those who have wide experience with many employees know that each year it grows more difficult to find those who will carry responsibility and deserve promotion.

It is not through ignorance, revolution, fanaticism, and destruction that man rises to fuller powers and richer life. The things of the spirit, the invisible forces which make men great, are developed by education, evolution, sound judgment, and constructive measures. The supreme factor in such development is the home. As Mrs. Richards said years ago, "The future of America does not lie in railroads, in machines, in commerce, in agriculture. The future of our republic will be determined by the character of the American homes."

AN ADIRONDACK HOME INSTITUTE[1]

It was the week of floods, Monday, March 3d, 1902, when three women, full of that enthusiasm which a new ideal inspires, started from different parts of the state to brave the freshets and penetrate to the heart of the wilderness.

Thirty-five women came through the still falling snow, and to them was explained, with the aid of charts, the different food principles, the function of each and the application of heat in cooking in such a way as to develop the best natural flavor, digestibility, and nutritive properties. The difference between a good housekeeper and a good homemaker was drawn, the history of sugar and its food value was briefly told and enough anecdote and illustration were introduced to sugarcoat the pill. Many photographs were shown illustrating physical culture through housework, right and wrong positions in sweeping, washing dishes, bending over washtubs, lifting, standing, and walking, proving that much of our tired muscles and overstrained nerves is due to their wrong use.

On the practical side an appeal was made to the men. A farmer or carpenter needs good tools to do his best work and a woman needs the best utensils and every possible convenience to do her work with the least expenditure of time, strength, and effort. We have learned that human energy is the most expensive source of production and that to save all possible waste we must apply the principles of economics. There should be shelves, hooks, and cupboards within easy reach. Washtubs, sinks and tables should be raised to the best height for the worker. Let every husband go home and study the needs of the kitchen with his wife,—a shelf here, a few hooks there, something to make the work easier. It will repay tenfold the time and cost.

A traveling library containing 30 of the best books dealing with food and various questions of the home was shown and explained. Read, think and study, carry out in your families the best thought you can gain. Do not adopt fads but only such things as have been scientifically tested.

This study of the home is just in its infancy as were the training schools for nurses and the farmers' institutes some 25 years ago.

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[1] *Proceedings of Fourth Lake Placid Conference on Home Economics, 1902.*

FACTORS OTHER THAN FOOD IN THE NUTRITION PROBLEM

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We no longer consider the nutrition problem one of diet alone, or even of dietary habits and physical defects. While we recognize these as major causes, those who have worked with the problem more than superficially are getting down to other fundamental factors, factors which perhaps have been overlooked because of their very closeness.

Calling to mind the recognized essentials for normal nutrition and proper growth of children, we know there must be food and water, adequate in both kind and amount, and that there must be air to permit of the oxidation of the food so that it may be utilized to carry on metabolism. The scientist has known for a long time that sunshine was necessary for the growth of plants and healthy growth of animals. It is considered essential in the cure of tuberculosis and valuable in convalescence from other diseases, and Dr. Hess is now emphasizing it in rickets. If effective in the cure why not even better in the prevention of all diseases? Also we know that both animal and plant life need periods of rest. Granting these facts we have as our fundamental requirements for good nutrition, food, water, air, sunshine, and rest. Nature has provided these fundamentals and it is for us to see that nature is given a chance. Anything that interferes with normal metabolism will obviously interfere with the nutrition of the child.

Somewhere there must be a borderline in these essentials below which good nutrition is impossible. Also there is an interrelationship between the different factors which probably alters the borderline under varying conditions. For instance, a child getting a very poor diet may not show its ill effect immediately if he has plenty of sunshine, or vice versa, but whether this same child will break down more quickly under a severe mental or physical strain later in life, than the one with both a good diet and plenty of sunshine during childhood, is not yet proved. Whether or not a child is normal physically, he should have plenty of all the natural requirements to give him the best possible chance for the future.

But granting that dietary habits and physical defects including carious teeth have been corrected, that we have overcome ignorance, indifference, and depraved taste, that we have shown mothers how to discipline spoiled children, that we have helped foreign mothers to adapt them-

selves to new foods and new market conditions, granting that even the majority of children have been brought into good condition, the minority of children with malnutrition if they survive will also become future citizens; perhaps with us rests the decision as to what kind of citizens, whether useful and self-supporting, or dependent and menaces to society.

What are the difficulties which must be overcome in addition to dietary habits and physical defects? In the process of development of our present social life and modes of living, habits and customs have arisen which are contrary to the growth of children. In the majority of instances, these superimposed habits and customs interfere with good nutrition because they prevent a proper supply of air, rest, and sunshine. In some cases, conditions are beyond the power of the child, the parents, the doctor, the nutrition worker, and the teacher to correct. There are bad housing conditions, a complex social life, prevailing styles in clothing, the temperament of the family and consequent emotional disturbances. A discussion of any one of these factors might prove interesting.

Housing conditions in our crowded tenements which are breeding places for all kinds of diseases are city problems and cannot be corrected by the children. There are too many dark, sunless, halls; too many narrow streets, dark alleys, and rooms where the sun never enters. These sunless halls, streets, and alleys are the playgrounds of hundreds of children deprived of one essential, sunlight. Some of the pre-school children do not go out of doors, do not see the sun, from November to April. At the Judson Health Centre in New York, one of Dr. Campbell's chief ambitions is to get people to develop the roofs of tenements into playgrounds where children will have plenty of fresh air and sunshine and thus give nature a better chance to carry out her laws. Here arises a community problem which needs the cooperation of the Housing Commission, city authorities, and social organizations.

The stairs in these homes may very easily keep a child from gaining. A boy or girl may live four or five flights up and have to climb as many more flights of stairs twice a day at school. These make at least twenty flights if he goes up those at home only twice daily. It is quite likely that he will climb at least thirty flights every day as a minimum, or if he does not climb the stairs that he will go without luncheon and buy candy or an ice cream soda in lieu of one. Climbing stairs requires energy and the energy thus used cannot be used for growth. If a child is tired, there is a question as to whether he can digest and assimilate enough food to cover the extra energy requirement. To

give a child more rest so that he may digest and assimilate more food, so that he may climb more stairs is like the "house that Jack built."

Sleeping conditions in these homes are deplorable. Sleeping accommodations at best in the tenements do not permit of enough air at night, but five or six may sleep in one bed in a small room with only one window on an air shaft. Is it any wonder they are pale and anaemic? The child cannot get to bed early because he sleeps in the room where six or eight are gathered for sociability, perhaps all talking at once. Tones are neither soft nor soothing. Lack of sleep deprives a child of his rest so that he becomes fatigued easily. Proper metabolism is again interfered with, good nutrition prevented.

But those living in congested districts are not the only ones who get little sleep. The electric light prolongs our day and entices children to stay up late. The social functions, such as parties, movies, clubs, dancing lessons, music lessons, are robbing children of their rest. We find many undernourished children among the well-to-do families for no other reason than this. Nature provides eight or nine hours of darkness for rest and we suffer when we try to improve on nature's laws.

Then the automobile, like our electric light, while it marks another epoch in our progress of civilization, plays its part in malnutrition though perhaps to a lesser extent. Some children are thus carried to and from school and deprived of a brisk walk in the fresh air and sunshine; they are taken for an airing but without exercise and often without direct sunlight.

In many children there seems to be little doubt but that temperament has considerable influence on the state of nutrition. One boy may have a sensitive nature, shrink and cringe and live in such terror that the nervous tension will extend to the nerves of the stomach. Another boy under the same exasperating circumstances may relieve his pent-up feeling by a smothered oath, rush out to play, forget the irritation, have a good time, come back serene and happy, and grow as he should. In too many homes, the mother is tired, nervous, fretful, and irritable. The family difficulties are discussed at meal time. Unhappiness and fear work against good digestion and proper nutrition. Whether or not this family temperament can be overcome, it is certain that the causes of it go too far back for the child to correct. Sometimes it is a national characteristic; sometimes it is due to one sad mishap after another that may have left the family bitter against the world in general; sometimes family affection has never been developed; sometimes an irritation in one member of the family may upset the whole group. Usually the conditions are social and need some one with a good understanding of the

family as a social unit to unravel the tangle. Or perhaps they need more brotherly love. Or they may need a psychiatrist to administer mental hygiene. More and more we will be looking to the mental hygienist to help us in some of the more remote causes of malnutrition. Less and less will we feel, as we study the underlying causes of malnutrition, that it is a plain physical defect and diet problem.

Another factor perhaps too little considered is the amount of clothing worn by too many children, both rich and poor. If there is not enough clothing, heat is lost from the surface of the body. If there is not enough food to replace this heat, the body will suffer or it may be that the body will be overtaxed in replacing all the heat lost. The poor suffer because they cannot afford more clothing. The rich suffer because of prevailing styles. Children are seen with short hose long after mother is wearing a fur coat, or before she discards it in the spring. With intelligent self-supporting families, educational methods are effective; not so with our needy city families. Another side of the clothing problem as suggested by Dr. Hess is that clothing also excludes sunlight, but this idea is too new for us to venture to suggest how to conserve heat and secure sunlight in winter at the same time.

Another factor in malnutrition, which is more often considered than housing or emotional disturbances, is poor posture. If a boy or girl stands or sits in a cramped position, the lungs and other organs cannot do the work intended. Or the position may be such that the intestines will be in an abnormal position and constipation will result. Bad posture is comparatively easy to overcome through education.

Whether constipation is due to posture or diet, it is equally important in malnutrition, but, since we are taking for granted that dietary habits have been regulated, constipation should also be corrected.

There are, to be sure, physical defects, dietary and hygienic factors which are remedial, but environmental conditions, our social and educational customs, the temperament of the child and, in fact, the whole family must be reckoned with, and are not so easily disposed of. And then with all known causative factors eliminated, there are still some children that fail to gain. This leads some physicians to say that inherited tendencies play no small part in good nutrition. In addition, all of these factors are influenced by the financial, intellectual, and social status of the family and the individual. The problem is seen to be difficult and complex when closely studied. It is medical, social, and educational. But malnutrition must go—must go through combined efforts of doctor, nutrition worker, nurse, teacher, social worker, and city authorities.

TESTS ON KITCHEN RANGES AND COOKING APPLIANCES IN ENGLAND

During 1917, when the British Government was collecting data on materials and methods of construction for use in large housing schemes then contemplated, the relative merits of various kitchen ranges was a subject chosen for investigation. A. H. Barker, Lecturer in Heating and Ventilating Engineering at University College, London, was asked to direct such investigation for the Department of Scientific and Industrial Research. The following excerpts from the general summary of his report[1] not only show the thoroughness with which the problem was studied but indicate some of the practical conclusions drawn. Elaborate diagrams and tables accompanying the report give detailed results of each experiment.

The kitchen range is a combination of several different apparatus such as a fire-heated oven, fire-heated hot plate, fire-heated hot-water supply boiler. It is frequently also intended, especially in small houses, to serve as a means for warming the room in which it is fixed. It has to serve for such purposes as boiling kettles, toasting bread, drying clothes, warming plates, and similar duties. All this work is designed to be accomplished with one fire.

The technical "efficiency" of a range is difficult to determine definitely because it is shown to depend to a large extent on the kind of fuel used, the way in which the fuel is burnt, and other factors, also on the conception adopted for the meaning of the expression "efficiency."

Two complete series of experiments were made on each range, which may be generally described as (1) physical tests, (2) practical trials.

The efficiency observed in the experiments under series (1) was the ratio between the work done and the amount of heat in the fuel consumed. The fuel was burnt on an artificial system so as to secure as far as possible constant thermal conditions in the plant itself, the "work done" being also reckoned on a similarly arbitrary and artificial basis, *e.g.*, the heat communicated to certain vessels of specified size under certain arbitrary conditions which were made to resemble as nearly as possible the actual conditions prevailing when the appliance is used in practice.

The efficiency of the hot-water supply was calculated as the ratio between the heat communicated to the water and that in the fuel consumed. All these were observed at several different rates of fuel consumption.

[1] "Tests on Ranges and Cooking Appliances," by A. H. Barker. Dept. Sci. & Indus. Research Gt. Brit. Fuel Research Bd. Spl. Rpt. No. 4, pp. vi + 55, figs. 15, London, H. M. Stationery Off., 1922, price 2 s. 6d.

In each case, the plant tested consisted of the several different functions or parts of a range combined in one appliance. For the purposes of the test, it was necessary to assume that each such function was a separate appliance. It was assumed, for instance, that during the hot-water supply tests the range was required for no other purpose than that of hot-water supply. All the heat escaping into the other parts of the apparatus was regarded as lost for the purpose of this experiment.

Similar observations were made in respect of each separate function. The total gross efficiency of the entire plant was taken to be the sum of the separate efficiencies taken when the appliance was used in one particular manner corresponding as nearly as possible to practical conditions.

Description of plant.—The experimental plant is described in detail in the report, accompanied by diagrams. Each range was so erected that any rate of draught could be exactly maintained by artificial means. Instruments were designed and constructed for observing the various quantities dealt with, such as the quantity of coal burnt and ashes produced, the intensity of the draught, the quantity of flue gas, the chemical analysis of the same, the quantity of hot water produced, the "temperature" or rate of transmission to vessels placed in the oven, the heat communicated to the separate hot water supply and to vessels placed on the hot plate, and the like. Each delivery of fuel was tested in the calorimeter.

Subsidiary investigations.—It was necessary, in order to obtain a sound basis for the experimental results, to make preliminary investigations of certain highly technical questions bearing on the efficiency. For instance, what difference in effect is produced when the same rate of combustion is maintained at different rates of draught, and corresponding differences in thickness of fire and quality of fuel. These and similar questions were investigated both in regard to the oven transmission and to the hot water supply.

Corrections of observations.—Questions of corrections of the observations owing to ancillary losses were also the subject of investigation.

Oven temperature.—An important question was also investigated of the extent to which the oven temperature as observed by a thermometer or thermo-junction is a measure of the rate of heat transmission to a vessel placed in the oven. There was found to be very small correspondence between these two functions. The oven temperature is shown to be a function of very uncertain significance.

Differences of oven temperature.—An important and very difficult practical question also arose in relation to the difference of apparent temperature in the upper and lower parts of the oven due to radiant heat.

Apparatus of different size.—One difficult question having an important bearing on the result was how to deal with apparatus having ovens of different size. After considerable investigation it was found that in two apparatus of the same design but of different size, the consumption of fuel for equal effect

varied in proportion to the surface area of the flues surrounding the oven on the one hand, and the surface area of the hot plate and the surface of the hot-water supply boiler on the other, and that two such appliances could be reduced to a common denominator by estimating the fuel consumption per square foot of such surfaces. This was done in all cases. It introduces great complication of calculation.

The rate of heat transmission to vessels of different size placed in the same oven varied as the superficial area of such vessel for small surfaces only; in other words, both the consumption and the transmission varied as the square of any one linear dimension. For larger vessel surfaces the rate of transmission per square foot of surface decreases as the surface of the vessel increases. This question was investigated experimentally.

Open and closed fires.—A series of experiments was made in order to determine the relative economy of open ranges of the type known as "Yorkshire" and closed ranges of the ordinary type.

The extravagance of the Yorkshire type is obviously due to the great excess of air inevitably used for combustion in an appliance of this type.

Excess of air.—Extended investigations were made of the degree to which losses were caused by this excessive aeration of the products of combustion. This was proved to be the principal cause of loss in a range. It arises through leakage into the furnace chamber and flues of cold air from the kitchen. The more perfectly this leakage can be prevented the greater is the economy. Apparatus were tested in their original form, and were so altered as to reduce the excess of air employed, and the differences in consumption noted. Prevention of leakage of cold air also has a most important effect on the draught induced by the chimney.

A condition of air tightness was shown to be inconsistent with some of the facilities usually demanded by the cook, such, for instance, as the ability to toast bread at the front of the range.

It was proved that one condition of maximum economy is that the fire should be so completely enclosed that air cannot obtain access to the furnace or chamber flues otherwise than through the incandescent fuel. The thickness of the fuel should be adequate to carbonize as much as possible the air used for combustion. The composition of the flue gases is a reliable criterion of this effect.

In no case of an ordinary range did the analysis of the flue gases, which was made continuously throughout all the later tests, show more than 2 per cent of CO_2, indicating that at least six to ten times as much air for combustion as is necessary is commonly used.

The most economical results in general boiler practice are secured when the proportion of CO_2 in the flue gases is about 12 per cent, but no figure even approximating to this value was ever obtained throughout the whole experi-

ments. Those ranges in which the fire is totally enclosed in some cases rose as high as 7 per cent, and showed a correspondingly high efficiency.

Influence of one part of the range on another.—It was found that in two ranges of similar general construction, as the efficiency of the hot-water supply and of the hot plate rises, that of the oven decreases almost in proportion, the total efficiency of the appliance considered as a whole being roughly constant for apparatus of the same general construction. This proves the great influence which the hot-water supply portion of the plant has on the efficiency of the oven.

In order to investigate this matter two of the appliances were tested in the following way: continuous observations were taken for several weeks of the apparatus provided with the usual back boiler. The latter was then removed and replaced by firebrick blocks, and the same appliance then tested without the boiler. It was found in both cases that the total consumption was reduced by from 50 per cent to 66 per cent when the boiler was removed. This proved that the presence of a boiler in a range is a very extravagant feature considered in relation to the use of the apparatus as an oven. On calculating the total efficiencies by adding together the individual ones taken in one arbitrary condition, it was found that there was a surprising measure of uniformity between most of the ranges of the same general type. Some few of them of unusual type were widely different from the bulk, but in the main it may be said that the ordinary efficiency of such an appliance when all the functions are in use simultaneously for cooking purposes, with the oven regarded as the principal function, is in the neighborhood of 7 per cent.

Position of oven.—An investigation was made of the relative advantages and disadvantages of different positions of the oven in regard to the fire. It was found in all cases that those ovens which were placed immediately over the fire so that the fire played on the bottom of the oven before reaching the top were very much more efficient in direct transmission than in the opposite case. But it must not be lost sight of that, for many oven purposes, the effect of what is called 'top heat' is very different from that of 'bottom heat.' In some cases 'top heat' is very necessary to produce crisp baking effects and the like. Also the arrangement of the fire below the oven hinders its effective use for hot plate and boiling purposes, and the simultaneous cooking in the same oven of articles requiring widely different treatment, e.g., baking bread and milk puddings. This difference again raises the question of the operation of radiated and convected heat in the interior of an oven, a scientific question of great difficulty. The result of the practical investigation shows that 'top heat' is much more expensive in fuel than is 'bottom heat,' and this cost is rendered all the greater by the common practice of using the top part of the flue above the top of the oven as a hot plate, thereby producing heavy cooling effects.

Effect of hot plate.—This matter was also investigated by clothing the hot plate in several of the appliances with a heavy asbestos mattress which to a large

extent diminished the heat lost from the hot plate. The effect on the oven economy was most marked. This device alone decreased the fuel consumption for a given effect by some 35 per cent, varying at different rates of consumption to some 20 per cent.

Extravagance of combination of functions.—The general conclusions arrived at are that the combination of several different functions in one range renders each such function excessively extravagant when considered alone. The combination is only relatively economical when all the functions are in use simultaneously. Even in that case existing designs cannot be called really economical, because of the circumstance that the consideration kept in view in making such designs has been the convenience, compactness and cheapness of the whole device, and not the conditions which would lead to a maximum of economy, which latter are in many or most cases inconsistent with the foregoing.

Further, it is open to question to what extent all the parts of a cooking appliance are actually required simultaneously in ordinary practice. It is only rarely that this combination is required in a small house. No doubt during the preparation of a big dinner of several courses all parts of the plant might be required simultaneously, but generally in a small household only one part of the appliance is wanted at one time. For instance, in a working man's house at breakfast time the hot plate is the only part of the appliance needed. All the operations necessary for the preparation of a working man's breakfast can be easily conducted on the hot plate only. If, therefore, the apparatus is such that the hot plate cannot be heated without simultaneously heating the oven and the hot water supply, it necessarily involves great extravagance in fuel. Similarly, it may be that in a working-class family the children receive only a weekly bath, and that for the purposes of saving fuel they are all bathed on one particular night, generally Saturday night. On that occasion the hot water supply portion of the plant only is needed, and any heating of the oven and hot plate is unnecessary, and even in summer very undesirable. A separate hot water supply apparatus of simple character uses only one quarter of the fuel required by a range boiler. Several of these have been tested.

Thus, in the interests of economy, each portion of the plant should be designed for maximum economy separately. Whether or not this condition may be secured with only one fire is one of the principal practical questions raised by this investigation. The disadvantages—amounting to impossibility in many cases—of supplying more than one fire for a very small apparatus is, of course, recognized.

GENERAL RESULTS OF PRACTICAL TESTS

These tests were designed with the object of investigating the economy of the various appliances as they would be used in practice in the cottage of a

working-class occupant. A standard menu was designed to test the capacity of the appliance for stewing, baking, casserole cookery, and light cooking, also for supplying definite quantities of hot water at definite times of the day. The standard menu was carried out on each of the ranges tested, and comparision made between the fuel required in each case.

It was found in all cases the result of the physical tests was a very sound guide to the economy of the appliance in practice. A carefully detailed report on the performance of each range was drawn up at the conclusion of the experiments, based on the practical convenience, durability, rapidity, and economy of the appliance as appearing to the experimenters after a test, which, in each case, extended over about three weeks.

The committee has arrived at the following conclusions as to the principles which should guide the construction of cooking ranges to secure fuel economy, so far as these may be applied consistently with convenience and other considerations.

Air should only have access to the fire through the grate bars; the fire should therefore be as completely enclosed as possible. The furnace should be lined with non-conducting material except at any part where heat is required to be directly transmitted. The fire should have a minimum thickness of about 5 inches.

In-leakage of air into the flues and oven should be prevented, hence loose rings in the hot plate and cleaning doors should be reduced to a minimum; the cleaning doors, rings, and otner parts of the range where leakage of air could take place, should fit with as air-tight joints as practically possible; the fit of the oven door should be as good as practicable.

Loss of heat through surface radiation should be prevented whenever such surface is not required for cooking or heating purposes; hence the oven door and iron plates on the top and front of the stove should be lagged with non-conducting material; the flues adjacent to the faces of the grate, other than the hot plate, should likewise be lined with non-conducting material; only such area of hot plate as is required for cooking purposes should be exposed to direct heat.

For economy the hot gases should impinge on the bottom of the oven as soon as possible after leaving the fire, hence the fire is better placed relatively low to the oven; flues should be arranged so that the gases first pass under the oven and subsequently over it; top heat, however, is preferable for certain kinds of cookery; this may be provided for, though it should be borne in mind that top heat is relatively expensive in fuel.

The fire should be immediately under, and able to radiate directly up to, that part of the hot plate where the strongest cookery or boiling effect is required.

Ranges should be designed to burn coke efficiently as an alternative to coal.

Appliances which combine several functions use considerably more fuel than would be required if each function were performed by a separate appliance.

The rising grate effects economy mainly by excluding cold air from the top of the fire when the grate is raised.

High rates of oven transmission are rarely necessary; they make the oven too hot for ordinary cooking.

The practice of using the interior of the oven as a hot plate and conducting therein many of the operations commonly done on the hot plate is sound and economical.

Transmission of heat is facilitated by placing the vessel on the bottom of the oven; there is a danger, however, of the food burning.

An advantage of the movable grate is that it allows cooking to be conducted economically with the grate on the top notch, and, by lowering the grate, enables a toasting effect to be obtained, but at a great cost in fuel.

Uniform oven temperature for a considerable period is desirable for certain operations, but a sharp rise in temperature is necessary for others, and a difference between top and bottom heat is very desirable.

Small ovens are generally much more economical in practice than large ovens, but skilful management is necessary to cook a large meal on a small range.

The height of the oven should be such that it is possible to examine the contents of dishes without removing them. The fireplace and the hot plate should be at a convenient height. An inner door to an oven having transparent panels is a great advantage.

A hot plate should provide a wide range of temperatures and only sufficient space to accommodate all the vessels ordinarily required during the preparation of a dinner.

Contact of the cold surface of a boiler with incandescent fuel is undesirable.

TEMPERATURE INSIDE THE JAR DURING COLD PACK PROCESSING

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The following experiments were performed by an advanced food class in the Department of Home Economics, University of Missouri. They have been found to make very satisfactory class problems and are suggestive of the large amount of investigation which is needed along this line.

Glass jars were fitted with metal lids through which a thermometer was fastened, the bulb reaching to the center. The jars were packed with the fruit or vegetable, filled with water or syrup at 60°C., and immediately lowered into a boiling water bath. Only a few were introduced into the bath at the same time so that the boiling was not interrupted. The temperature was recorded every 10 minutes during the first hour, and then about every 15 minutes until the contents in the center of the can had reached 100°C. The results are tabulated in table 1.

TABLE 1

Rate of temperature change inside glass jars during cold pack processing

CONTENTS OF JARS	SIZE OF GLASS JAR	LIQUID	TIME REQUIRED TO REACH 100°C.
			minutes
Tap water	Quart	Water	26
Apples, quartered	Quart	Water	30
Carrots, whole or quartered	Quart	Water	45
String beans	Quart	Water	35
Plums	Quart	30 per cent sugar solution	70
Sweet potatoes precooked, whole or quartered	Quart	Water	85
Sweet potatoes precooked, bulb inside potato	Quart	Water	155 to reach 98°C.
Corn, Maryland style	Quart	Water	80
Corn, Maine style, loose pack	Quart	Water	180
Corn, Maine style, tight pack	Quart	Water	210
Corn, Maryland style, precooked	Pint	Water	70
Corn, Maine, precooked	Pint	Water	90

These illustrate again that the rate of change of temperature inside the container during the processing increases as the composition of the food interferes with the circulation of the free liquid.

1. BITTING AND BITTING. Bacteriological examination of canned foods, *Nat. Canners' Assoc. Bul.*, 14, 47, 1917.
2. BOVIE AND BROFENBRENNER. Studies on canning. An apparatus for measuring the rate of heat penetration. *Jour. Indus. and Eng. Chem.*, 11, 246, 1917.
3. CASTLE. Effect of pack and depth of water bath on interior temperature of jars in cold pack canning. *Jour. Home Econ.*, 11, 246, 1919.
4. DENTON. What temperature is reached inside the jar during home canning. *Jour. Home Econ.*, 10, 548, 1918.
5. THOMPSON. Temperature-time relations in canned foods during sterilization. *Jour. Indus. and Eng. Chem.*, 11, 657, 1919.
6. MAGOON AND CULPEPPER. A study of the factors affecting temperature changes during the canning of fruits and vegetables. *U. S. Dept. of Agriculture, Bul.*, No. 956, 1921.

DOES IT PAY TO BAKE BREAD AT HOME?

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The answer to this question is, of course, directly contingent upon the money value which the housekeeper feels that she should place upon her time or upon the time of the person who makes the bread. Some housewives are quite willing to narrow somewhat their margin of leisure time for a truly useful undertaking; they would gladly add bread making to their list of duties if they could be sure they are indeed saving money by so doing.

The factors which determine the margin upon which the housewife operates when she endeavors to make the home process of bread making pay in dollars and cents are numerous and variable from time to time as well as from person to person or from place to place. Chief among these are the economical advantages or disadvantages under which she may labor in purchasing her supplies, the nature of her formula or recipe, the quality of the materials she uses, the skill with which she combines these materials and carries on the process of bread manufacture, and the price and quality of the fuel she uses for baking.

The formulae used for homemade bread differ greatly. Omission of fat, decrease in amount of sugar used, substitution of milk for half or for all of the liquid are illustrations of ways in which the nature of the recipe greatly affects the cost of materials. Proportion of yeast or form of yeast preparation used is another cause of variation. One one-half ounce cake of compressed yeast may be used to make anywhere from 1 to 10 loaves, according to time and temperature of sponge or dough incubation. One cake of dried yeast may be used in similar fashion, by allowing sufficient time for dormant cells to become active. Use of homemade bottle yeast or homemade dried yeast cakes would reduce the cost still further.

The cost of ingredients to the housewife depends not only upon their quality and the amounts used, and upon local retailers' prices at the time of purchase, but also upon the amounts purchased at one time. To illustrate, flour may cost 10 cents per pound if purchased in 5-pound lots, or about $5\frac{1}{3}$ cents per pound on the same day at the same store if purchased by the barrel.

Three-fourths pound of flour may often be used to make more than 1 pound of bread, e.g., occasionally as much as $1\frac{1}{4}$ pounds. This ratio,

weight of bread baked to weight of flour, depends upon flour strength and consequent water absorption, weight of added ingredients, the way in which they affect water absorption and retention, etc. It would, therefore, under some circumstances, be the case that about $\frac{2}{3}$ pound of flour (instead of $\frac{3}{4}$ pound) would bake 1 pound of bread.

The cost of fuel used depends not only upon the price of the fuel (which varies greatly with locality and with kind of fuel), but also upon its B. T. U. or calorie value, upon the efficiency of the oven and burners used, upon the size of the batch of bread and its relation to oven capacity, etc. Natural gas has almost twice the B. T. U. value of manufactured gas, and is usually cheaper per unit of volume. Again, when 1 loaf is baked alone in a 15 x 18 inch uninsulated oven, the cost of gas for baking may be almost $\frac{2}{3}$ as great as if the oven were filled with pans holding 8 loaves; the cost of fuel is therefore about 5 times as much per pound of bread in the former case as in the latter. Again, when wood or coal is used as fuel for the kitchen range, the amount of extra fuel needed for baking bread may be very small. The use of these fuels would therefore materially decrease the estimates given below.

I. Cost of 1 pound of homemade bread, based upon cost of batch of 5 loaves. Materials bought in small quantities; flour of only moderate strength; compressed yeast; high-priced gas used with uninsulated oven for baking:

$\frac{3}{4}$ lb. flour at 7¢ per pound	$0.0525
$\frac{1}{2}$ oz. lard at 20¢ per pound	0.0063
$\frac{1}{2}$ oz. sugar at 7¢ per pound	0.0022
$\frac{1}{3}$ of a 3¢ cake of yeast ($\frac{1}{2}$ oz. compressed)	0.0060
$1\frac{1}{4}$ teaspoons salt at $2\frac{1}{2}$¢ per pound	0.0004
Total cost of ingredients	$0.0674
Manufactured gas at $1.05 per M, 25 cu. ft. for 5 loaves; per loaf	0.0052
Total cost of ingredients and fuel	$0.0726

II. Cost of 1 pound of homemade bread, based upon cost of batch of 8 loaves. Materials bought at retail prices but to good advantage; strong flour, consequently high bread yield; dry yeast cakes, purchased; no shortening used; kerosene range employed for baking.

$\frac{3}{4}$ lb. flour at 5.36¢ per pound	$0.0358
$\frac{1}{2}$ oz. sugar at 6.25¢ per pound	0.0020
$\frac{1}{4}$ cake of dried yeast (10¢ for pkg. of 5 cakes)	0.0025
$1\frac{1}{4}$ teaspoons salt at 2¢ per pound	0.0003
Total cost of ingredients	$0.0406
$\frac{3}{4}$ pint kerosene, at 15¢ per gal.; per loaf	0.0018
Total cost of ingredients and fuel	$0.0424

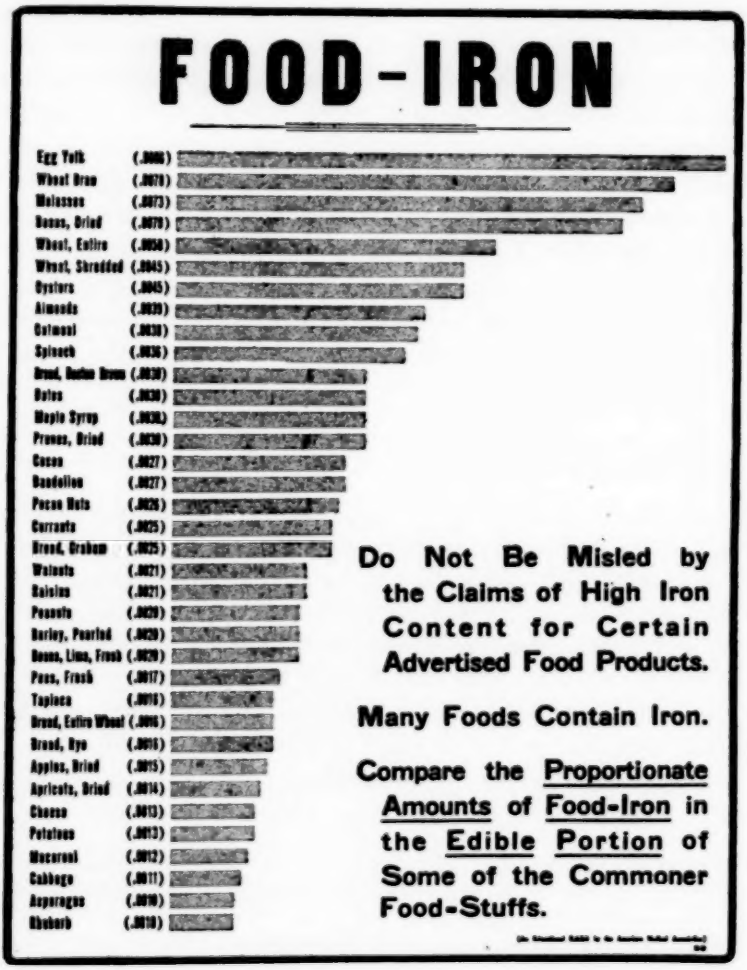
The two foregoing estimates were based upon retail prices prevailing in local markets in Washington, D. C. in May, 1922. At that date bakers' bread was selling for 8 cents per pound in most of these markets. It is believed that neither estimate represents extremely high or extremely low costs; although seven factors have been allowed to show opposite effects in these two instances.

This discussion ignores all questions connected with the valuation of a woman's time when she is busy with many housekeeping duties which can be carried on during the bread-making process; with the respective merits of the best (and poorest) homemade, as compared with the best (and poorest) bakers' bread; with the advantages of being able to suit the peculiarities and preferences of different members of the household, by home baking; with the educational value, for the children, particularly the daughters, of a family, of carrying on baking at least occasionally as a home industry; with the need which many a farm housewife has, for decrease of time devoted to physical labor and increase of time devoted to recreation and to other activities having spiritual rather than material values; with the problems and principles of national economy of materials and labor, which call for baking on a large rather than on a small scale, by specialists rather than by unspecialized operators; and with other economical and sociological aspects of this matter, which will, no doubt, occur to the reader.

"Happiness, satisfaction, and progress—all demand a new view of the home as a permanent human institution if the highest welfare of the individual, the family, and the nation is to be secured with its help. Neither men nor women should be content to cling to outworn industrial, educational, and social customs as a basis for the home. They should rather seek to find expression, under changed and ever changing conditions, for those functions of the home which will outlast any industrial, educational, or social system."—*Marion Talbot in The Education of Women.*

FOODS AND QUACKERY

The Propaganda Department of the American Medical Association is collecting information on the nostrum evil, quackery, and allied subjects, and disseminating it through the columns of their journal; through their book, "Nostrums and Quackery," and smaller publications; through lantern slides; and through correspondence with individuals or organizations who seek advice. They have prepared posters to correct the misinformation sent broadcast by exploiters of certain food products. The accompanying chart is an illustration of this part of their educational program.



EDITORIAL

Research Studies. Extended and important studies of cooking appliances by A. H. Barker, and his associates Gwenneth Haigh, A. M. S. Wilson and Mabel Slater, from which extracts appear elsewhere in this journal, were initiated under the Building Materials Research Committee of the Department of Scientific and Industrial Research of Great Britain, and completed under the Fuel Research Board.

The committee appointed to make arrangements for carrying out research on building construction and other matters prepared a program of investigation indicating the directions in which research was desired regarding the construction of houses for the working classes, and including an investigation into "cooking and heating grates" to determine the most suitable types for standardization.

Progress reports of the work were made to the Board and are referred to at some length in its reports for 1918 and 1919. As the investigations were not completed when the Building Materials Research Committee reported in 1920 on the other investigations carried on under their direction, Mr. Barker's tests were continued for one year under the Fuel Research Board.

The report which is very full gives an account of the general nature and purpose of the scientific and practical problems involved, and a description of the testing plant which was located in two rooms of the basement of the laboratory of heating and ventilating engineering at University College, London. A full account is given of the methods and procedure followed in the tests. The diagrams summarizing results are explained and conclusions are given.

Besides the commercial ranges tested the investigation included ranges designed for the experiments. The report also includes the results of a comparison of the relative fuel costs of coal and gas ranges, the general conclusion drawn from the tests being that the "gas oven is considerably more efficient physically than the coal oven. Where the oven is the only consideration it would be cheaper, cleaner, and easier to use gas for cooking."

As pointed out in the preface, the report made by Mr. Barker and his associates is a useful supplement to an earlier paper, "The Coal Fire," an investigation into the efficiency of open fires. This work was carried on by Margaret White Fishenden, D.Sc., and was published as Special Report No. 3 of the Fuel Research Board, 1920.

Because of the different systems of publication and distribution of official documents it is not an easy matter to keep track of results of investigations carried on under government auspices in Great Britain. However, the U. S. Department of Agriculture has some special facilities for establishing contact, and the Office of Home Economics has made a special effort to keep in touch with such work as had to do with home problems by correspondence and in other ways. A list of such literature has been brought together and many of the titles listed have appeared in the bibliography section of the JOURNAL.

Protection for Children. State responsibility for the protection and welfare of children is emphasized in the comprehensive recommendations made to the 1923 sessions of the legislatures by the Children's Code Commissions of North Dakota and Kansas, according to a statement made by the United States Department of Labor through the Children's Bureau.

In North Dakota the establishment of a state board or bureau to exercise general supervisory control over the entire field of child welfare activities in the state is recommended. The creation of county child welfare boards, to cooperate with the State department; the amendment of the laws relating to the licensing of homes, institutions, and agencies caring for children and to the licensing of maternity hospitals; and changes in the mothers' pension law, the adoption law, and the illegitimacy law are included in the program mapped out by the commission. Amendments to the juvenile court law which will provide for careful investigation of cases before hearing, physical and psychological examinations, proper probationary supervision and the adoption of a rational program for the care of the feeble-minded, and adequate provision for the physically handicapped complete the recommendations for children in need of special care.

With reference to education and child labor, the North Dakota Commission recommends that school attendance be required until the completion of the eighth grade or until the eighteenth birthday is reached, and that the enforcement of the compulsory school attendance law be assigned to county welfare boards in counties where they are organized. Special classes for handicapped children and greater stress upon training for citizenship are urged. Enactment of a street trades law, changes in the employment certificate provisions of the child labor law, and centering in the minimum wage bureau responsibility for the enforcement of the

child law are recommended. In the field of child hygiene the commission recommends more liberal appropriations for enforcement of the vital statistics law, the larger use of physical and mental examinations, and acceptance of the Maternity and Infancy Act by the legislature.

The Kansas Children's Code Commission also recommends the development of county boards which would cooperate with a State department in promoting the welfare of children. It is planned, however, that the activity of these boards will include the whole subject of public welfare, and that a State Superintendent of Public Welfare will be appointed. Safeguarding of adoption and of the placing of children in family homes, the establishment of courts of domestic relations in the more populous counties, and raising the juvenile court age from 16 to 18 are included among the recommendations of the commission. Fourteen years is proposed as the age limit for all employments, including commercialized agricultural work, and 16 years for specified hazardous employments. It is recommended that the age of compulsory school attendance be 7 to 18 years for children not employed and not having completed the twelfth grade, and that attendance for the entire session be required. Children 14 years of age and over who have completed the eighth grade may be excused from school for work, but part-time school attendance is required until the tenth grade is completed.

It is proposed that a State Board of Physical Education be established and that all children in public schools be given health instruction and physical education, and medical examinations on entrance to school. The measures recommended include also bills relating to physically handicapped children, the appointment of public health nurses by county boards of health, and the regulation of midwifery.

Insulin and Diabetes. Although still in the experimental stage, the use of insulin in the treatment of diabetes has the growing confidence of the medical profession and is at this moment the subject of multifold investigation intended to perfect the mode of its administration.

Insulin is the name given to the active principle contained in an especially prepared pancreatic extract which, when injected subcutaneously, restores the power of the body to metabolize carbohydrate. The discovery of insulin is indeed one of the most epochal of the many notable ones in the field of medicine; for this contribution, the world is indebted very largely to a group of men at the University of Toronto. The isolation of insulin and the success attending its clinical use make a thrilling story for whoever cares to read; such an account together with

the present status of the drug is to be found in the Journal of the American Medical Association.[1] The manufacture and distribution of the extract are to be, at least for some time, under the control of the University of Toronto, until the strength of dosage can be known with greater certainty; it is hoped in this way to forestall its improper use with such probably serious results as would interfere with the establishment of its usefulness.

It is not claimed for insulin that it will usurp completely the place of careful dieting in diabetic patients; dietetic restraint may necessarily accompany even the regular administration of the extract. But the body which has lost almost entirely its ability to metabolize carbohydrate, may now enjoy this power again and consequently acetone bodies entirely disappear from the urine so long as the injections are continued and, of course, the urine remains sugar-free. Because of the regained power for utilizing carbohydrate, the health and strength of the patient are much improved. The progenitors of the treatment see no reason why any well-trained physician should not be able to use the remedy if he is cognizant of its potency, its possible accompanying danger signals and the methods of antidoting unfavorable effects. Still indispensable to the physician using insulin is a thorough understanding of the science of dietetics.

SYBIL WOODRUFF.

[1] The Status of Insulin. *Jour. Amer. Med. Assn.*, April 28, 1923, p. 1238.

OPEN FORUM

Delaware State Nutrition Program.[1] In Delaware there are 116 so called welfare associations. Last spring a dozen associations interested in nutrition work sent representatives to a conference called by the Extension Director of Delaware University to consider a state program for nutrition work.

A committee of three composed of the State Home Demonstration Leader, the State Supervisor of Vocational Home Economics and the State Director of the Child Welfare Commission submitted the following plan:

[1] The program of work of the American Home Economics Association as suggested to each state, included a survey of the field and organizations doing similar work therein. It also suggested coöperation with all such groups wherever arrangements could be made. The successful results of excellent coöperation in the state of Delaware, as submitted in brief, are of particular interest to state associations.—EDITOR.

Object of program for this year. To get the need of nutrition work before the people.

Methods of Procedure.

1. General newspaper publicity.

2. Reaching parents through Parent-Teachers' Associations by:

a. A speakers bureau to be composed of the 24 home economics teachers, 14 welfare nurses, and the state officials of all interested organizations.

b. A home program in every Parent-Teachers' organization in the month of January. During this month a pamphlet to be sent to every P. T. A. with a program for their meeting.

c. Medical inspection in school increasing the services rendered by the fourteen health centers in the state. The nurses are to be instructed in nutrition by the State Home Demonstration Leader.

d. The traveling dental clinic. This clinic is supplied by the Service Citizens of Delaware.

e. Interesting the children in their own health. Large charts are to be hung in every school room, and the usual stars awarded. Individual records to be kept for the underweight children. These cards are in charge of the home economics girls of the high schools of the state who will do the weighing each week and the charting, and will also direct the diet of the children.

f. Adult nutrition classes. Under the supervision of the State Home Demonstration Leader, study classes in nutrition will be held in thirteen communities to reach the isolated communities, while four three-day health schools will be held in the more populated parts of the state.

3. General publicity through other organizations.

a. Clean milk campaign, Inter-State Dairy Council.

b. Tuberculosis eradication, Anti-Tuberculosis Commission.

c. Hot school lunches, American Red Cross.

d. General publicity meetings, granges, Women's Clubs, Community Clubs, etc.

The above program, carried on under the general direction of Katherine E. Woods, State Home Demonstration Leader, has been in force for seven months, and we are in a position now to say that in spite of numerous set backs we feel that Delaware people are much more familiar with the need of nutrition work than last year and are in a receptive mood for any work we may plan for next year. Briefly the work performed by the various organizations has been as follows:

State Child Welfare Commission. Held medical examination and weighed and measured children in rural schools. Follow-up work by nurses. Have fourteen welfare centers where special nutrition programs were held in January.

State Department of Public Instruction. In twenty-three centers where Smith-Hughes work is given in home economics, all children in the schools were weighed and measured by the home economics girls. The State Board of Public Instruction purchased scales for each school. All under nourished children were formed into nutrition classes that were placed in charge of the home economics girls who checked their weight each week, keeping all records. The home economics girls also gave health talks in all of the lower grades, originated many interesting devices to record weights and arouse the enthusiasm of small children.

Extension Home Economics, University of Delaware. Three three-day health schools, eleven two-day health schools held in different parts of the state.

Parent-Teachers' Association. Emphasized January as Health Month in over 250 of their associations. Installed hot lunches in many rural schools.

American Red Cross. Installed equipment for hot lunch in fifteen rural schools the previous year. Added to this as funds permitted. Furnished a nurse to give instructions on first aid and home nursing in all the high schools of the state.

Women's College, University of Delaware. Girls taking home economics had charge of a nutrition class at the local school, thus fitting them to handle such work when they shall become teachers.

Inter-State Dairy Council. Held meetings in the dairy portion of the state which resulted in cleaner and better milk. Held five demonstrations for mothers on "child feeding" in Wilmington.

Tuberculosis Commission and Anti-Tuberculosis Association. Nurses gave personal instruction to all cases reported to them.

Service Citizens of Delaware. Fitted out and paid expenses of traveling dental clinic. Carried on demonstrations to show relation of nutrition to bad teeth. Published programs used in Parent-Teachers meetings.

Miscellaneous. Many organizations gave a special nutrition program, thus putting the subject before their members.

As yet no figures have been compiled. It will not be possible to secure figures to show the extent of the work, but the general interest shown by people in nutrition can be felt. Because of this we feel that our first year's trial of a state nutrition program has been a success.

A Calorie Bee for the Dietetics Class. There have recently been published in Science,[1] interesting and amusing accounts and comments upon a chemical spelling match held at the suggestion of Professor C. A. Jacobson, at the University of West Virginia. Names of compounds were given out and the students in competition responded with the formulas, structural or empirical as required. Sides were chosen and the competitors "spelled each other down" in the manner of the old-fashioned spelling bee. It is probable that this is not the first instance in which names and symbols have been conjured together by chemistry classes in a kind of game, but the publicity attendant upon this example of use of the play spirit has brought the idea prominently forward at this time.

It occurred to the writer that the device might be used in connection with that memorizing and visualizing of the caloric values of foods, which is so necessary and often so irksome a part of the college course in dietetics. The indiscriminate calculating and weighing of one hundred calorie portions, which is usually the backbone of such a course, would appear a little shopworn as a laboratory exercise for senior students who have finished exacting courses in quantitative chemical analysis, food analysis, biochemistry, bacteriology, and often physics and physical chemistry as well. Nevertheless, since some means of making these approximate caloric values familiar and usable must be devised, two or three exercises were introduced involving the careful calculation of caloric content per gram of the important *food classes*, so far as such classes can be distinguished, from the analyses quoted in U. S. Department of Agriculture Bulletin 28. The weights in grams and ounces of portions which yield one hundred calories were calculated from these figures, and these amounts weighed out with due reference to the presence or absence of inedible refuse. This was followed by a calculation of calories per pound of each class of foods as purchased, and a certain amount of discussion of the method of comparing relative costs per one hundred or one thousand calories of important types of foods.

The effect of cooking upon these caloric values was then worked out rather briefly, and a laboratory period devoted to the calculation and preparation of "made dishes," using the usual method of weighing and calculating calories separately for each ingredient.

All of this was preceded by several periods' work with the bomb calorimeter, in the course of which the students carried out combustions of samples of food which they had previously subjected to the usual proxi-

[1] Jacobson, C. A., A Chemical Spelling Match. *Science*, vol. 56, p. 368 (1922).

mate analysis. This provided an opportunity for the comparison of experimental and calculated fuel values of foods, and insured an intelligent and critical attitude toward the later mechanical manipulation of "standard portions."

It seemed unfair to use any more time than that required for the introduction of these principles and methods in the repeated drill which is often considered necessary in order to fix these values in the student's mind. It was therefore announced that a "calorie bee" would be held toward the end of the term, and that familiarity with the average caloric values of common foods would be the basis of competition. No effort was made to fix any one method of memorizing these values, and it was left to the individual to choose to remember calories per gram, per ounce, per pound, or weight of one hundred calorie portion in grams or ounces. It has long seemed to the writer unfortunate that so much uncritical emphasis has been placed upon the value of the one hundred calorie portion as to give it a quite undeserved prominence among the devices for teaching the nutritive differences among foods.

Upon the occasion of the calorie bee, two leaders from among the students were chosen by lot, and these called off the rest of the class in turn, till two equal sides were formed. The blackboard had been ruled off previously with spaces for weight and measure as stated by the competitor and as measured out by her, true weight and measure, per cent error, and score. The particular foods were given out, as each student came up for her trial. There were thus two chances for each competitor on each trial, since her announced or mental memory was counted equally with her measured out or visual memory of the portion called for. In general, one hundred calorie portions were called for, but one thousand calorie or calorie per gram figures were also used. Each student was allowed plenty of time to calculate the figure called for from that in which she had memorized the values if such calculation happened to be necessary.

Weights only were counted, and the scores were kept as 50 per cent or 100 per cent "wins," according as one or both of the figures given were correct. Anything within 10 per cent of the accepted average value was counted a win.

After the second round only 100 per cent wins were retained in the contest, and there needed to be carried out only four trials altogether in a class of twenty students. The time required for the contest was a little over an hour.

Generous-sized samples of all the foods used were provided for the contest, as well as trip balances, knife, measuring spoons and cups, ruled blackboard, a judge, a score-keeper and one other attendant.

There was little doubt in the minds of any who participated in or helped with this contest that it was not only good fun but of real value in fixing in the minds of the students these necessary and boresome figures as to the average fuel values of foods.

AGNES FAY MORGAN,
University of California.

Economics for the Homemaker. In an address before the Massachusetts Home Economics Association, Lorian P. Jefferson, Assistant Professor of Agricultural Economics at Massachusetts Agricultural College, discussed the need for economics in home economics. She summarized the responsibilities of homemakers as business managers of the household and buyers of household supplies, and urged that teachers apply economic principles to household problems. She said, in part:

Research work in the economics of the household has been neglected by both economists and home economists. No experiment station in the United States, despite great advances in research work, has even yet anyone engaged upon research in home economics. Some other institutions have done excellent work in the problems of nutrition and textiles and clothing, but the economic problems of the home have been overlooked to a great extent by all these agencies. In a recent list of subjects of theses prepared in departments of home economics and published in the JOURNAL OF HOME ECONOMICS, only two titles of four pages of titles were related to economic phases of household matters. Presumably this is a fair representation of the relative degrees of interest in these problems.

If we seek the causes of inefficient buying of household supplies, we shall find several common ones. Women are generally better judges of fabrics than of foods,—an unfortunate situation, since a much larger proportion of the average family income is spent for food than for clothing.

In buying clothing the specific use for an article is too often forgotten. Dresses are frequently purchased because they are pretty and becoming, with too little consideration of the time and place when they are to be worn.

Shoppers often buy at the most convenient store regardless of better prices or quality to be secured elsewhere. This seems to be particularly true in the matter of foods. A brief investigation made some little time ago in two Massachusetts towns revealed interesting comparisons. Oatmeal was to be had for 10 cents and 15 cents a package, depending on where it was purchased. Eggs, all strictly fresh, were selling at 41 cents, 42 cents, 43 cents, 45 cents, 46 cents, and 48 cents at different stores on the same day.

Sometimes we disregard the fact that there are proper times of day, week, or season in which to buy certain things. Perishables may sometimes be secured at lower prices late in the day, or late Saturday afternoon. Practically very housewife knows that the height of the season for berries and certain vegetables is the time when they are to be had most reasonably, but it is not always easy for her to learn when these various products are in the greatest supply. To aid in this, she may secure, on request, from the Federal Bureau of Agricultural Economics, reports giving statistics of receipts and prices of fruits and vegetables at some large market near her. Various state departments of agriculture, chambers of commerce, and boards of trade issue periodic market reports which give desirable local information. Certain quasi-public organizations publish valuable market reports, such as the Producers' Price-Current, issued by the Urner-Barry Company, New York. From these the housewife may become informed as to products on the market, the volume of receipts, and the range of prices.

Many homemakers buy "from hand to mouth," never having in the storeroom or pantry a reserve supply of even the most storable commodities. Buying in small quantities is uneconomical buying. . . . It would frequently be a matter of economy for the housewife to buy directly from the farmer, and obtain fresher products thereby. This may be done through the farmers' market where one is maintained, by patronizing the roadside markets or stands, or by making arrangement for delivery of produce at the door. . . . Groups of housewives have sometimes bought staple articles of food and household supplies coöperatively, with profit to each one. This method requires a good buyer and businesslike management. . . .

These suggestions are worthy of consideration by schools and departments of home economics. It should no longer be possible to charge that the curricula of these institutions neglect one of the fundamental phases of the field of home economics. Coöperation with economists and departments of economics in our colleges and universities should evolve courses especially designed for girls as future homemakers, or should result in a careful application, in general courses, of economic principles to the problems of the home.

Correction. The footnote concerning the two new houses to be built by the University of Minnesota for the home management laboratory work as stated on page 213 in the April number of the JOURNAL is incorrect. It is expected that the residence charge to the students will make possible a financial return to the University, but the exact amount cannot be stated at this time.

BOOKS AND LITERATURE

The Family and Its Members. By ANNA SPENCER. Philadelphia: J. B. Lippincott Company, 1923, pp. 322. $2.00.

This volume is the third in Family Life Series edited by Dr. Benjamin R. Andrews, of Teachers College, Columbia University, and is a contribution to the thought of teachers and students out of the learning and wisdom of one who is a rare student both of the books and of the life about her.

One is tempted, as one reads, to exclaim "knowledge comes, but wisdom lingers." In all fields of thought, knowledge is important; in some fields, however, and especially those dealing with problems of modern family readjustment, knowledge without wisdom is like motive power in an uncharted area.

Mrs. Spencer brings to the problems she discusses the wisdom resulting from honest observation, thoughtful and extensive study, generous sharing in simple experiences, ripe judgment, and courageous frankness.

The book, as has been said, is one of a series prepared primarily for classroom and student use. The various chapters deal, as the title suggests, with the family and its members, the mother coming first in the list. The fact that the mother is placed before the father is not the only interesting fact regarding the order of discussion. The children are placed not next to the mother and father but only after grandparents, brothers, and sisters, friends, and the "chosen one." In other words, the reader is introduced to an adult group, whose members, with all their varied interests, purposes, attitudes, and limitations, constitute the environment into which the children come.

This principle of selection and order is not accidentally applied, of course. It is a world of actualities, with its conflicting interests, its need and possibilities of adjustments, its claim on each and its contribution to everyone, that is of great concern to Mrs. Spencer.

Because, while designed for classroom use, it is a book about adults and for adults, the textbook form is often very irritating. The scheme of stating the topic of each paragraph in enlarged and different type has always seemed insulting to the intelligence of students; and there is surely no reason why the questions intended to make the use of the book simpler for teachers or perhaps for members of study classes of women's clubs, could not be assembled at the end of the book with the enlarged bibliography.

The book is very tightly packed, since the subject, the family and its members, gives opportunity for excursion into most of the topics of social economic organization today. The breadth of interest, the sound and accurate knowledge, the generous open-mindedness revealed in these numerous excursions into both highways and byways of domestic and social adventure are very striking. As this extensive view involves the use of many recent contributions, the critical estimates vary in value, but the selection is from an extraordinarily wide range, and the conclusions are always informed by the sound judgment characteristic of the whole presentation. The subject of the conflict of interest often faced by the professional woman who desires both domestic and vocational satisfactions is perhaps the most delicate and touching with which the author deals, and it is satisfying to realize that she does not even refer to *This Freedom!* The analysis of the contribution of the elders and the attention given to friendships and to the more remote relationships give a satisfying sense of reality. The "normal family" is as absent from these pages as from actual conditions of living.

As a humble disciple, it is difficult to suggest error to a master! But Mrs. Spencer well knows the difference between Roger Baldwin (p. 98), the youthful but militant pacifist, and the Hon. William H. Baldwin, who for years has given devoted and

sympathetic study to the problem of family desertion.

There is a passage in one of George MacDonald's Fairy Tales which Mrs. Spencer might have quoted but did not include among the beautiful passages with which the chapter dealing with the presence of older persons is introduced; it may not be wholly out of place in this grateful reference to this rich contribution not only from her thinking but from her own living. In that lovely story the "Wonderful Lady" is caring for a small boy who asks her how old she is. "Thousands of years" she says. "You don't look so old" is his gallant and wondering reply. "Why, am I not very beautiful?" is her amazing response.

S. P. BRECKINRIDGE,
The University of Chicago.

Home Play. Playground and Recreation Association of America, 315 Fourth Avenue, New York, 1922, pp. 96. Paper $.40.

The suggestions in *Home Play* will furnish helpful ideas in the important work of enriching home life through play and recreation. This handbook has grown directly out of the experience of the field workers of the Playground and Recreation Association of America during many years' work.

Some of the entertainments, contests, and stunts described are old friends; many are new. A veritable encyclopedia of good times, it has the games that make your sides ache and your tears flow from laughter. It has intellectual contests that make your brow wrinkle in thought. Active games and passive games! There are fireside story-telling, numerology, alphabet traveling, acting of Bible characters, picnic suppers, such games as "Who Hit Me?" "Ocean Travel," "Tangle-foot" and a host of others.

Special attention is given to the games of little tots in both outdoor and indoor play. Backyard play apparatus simply and cheaply constructed is suggested for the children. The mother on the farm is just as much interested in having a sand-box or teeter-board or swing for her little children as is the city mother. Specifications and full instructions for building apparatus are given. In addition, the appendix contains sketches that are a great help to the amateur apparatus builder.

The National Kindergarten Association, 8 West 40th St. New York, issues to the press of the country articles prepared by experts for the guidance of parents in the early training of children. These weekly articles are sent free to any newspaper requesting them.

If the members of our organization would ask the editors of their local newspapers to print these articles, this would be a valuable service to parents and would tend to arouse interest in early education, resulting in the establishment of more kindergarten classes.

There are four million children in the United States for whom kindergartens have not been provided.

The Development of Manners and Customs and Home Life in the United States. In "The English Traveller in America 1785–1835" by J. L. MESICK, Columbia Univ. Press, New York, 1922.

Those who are interested in the study of social history and in the development of manners and customs as they relate especially to the home, will find that some contribution is made by the author, more particularly in chapters on "Manners and Customs," "Care of the Unfortunate," "Education and Literature," and "Character." The bibliography and index will also prove useful to those who are seeking references to source material.

Successful Family Life, by Mrs. Mary H. Abel, formerly the Editor of the Journal of Home Economics, has been listed among "the one hundred best books of the year" recommended by the New York State Library.

Iono and Faradette. A comic opera in two acts. By D. C. LONG (*Jour. Indus. & Eng. Chem.*, Easton, Pa., News ed. Apr. 20, 1923, pp. 5–6). The original manuscript of the author, a student at Yale College, was adapted for presentation at the spring

meeting of the American Chemical Society by Dr. John A. Timm of Yale University, who also composed some of the songs, both words and music, and directed the presentation at the Yale Dining Hall, Tuesday evening, April 3, at the smoker of the American Chemical Society. Home economics students may find it of interest either for presentation or as suggestive of similar forms of entertainment.

Training for Nutrition Workers. Report of the Sub-committee on Training Standards of the Advisory Committee on Foods and Nutrition of the National Child Health Council. Published by the American Child Health Association, 370 Seventh Avenue, New York City. Single copies free; quantity rates sent on request.

This pamphlet outlines the training that will meet the standards set by the committee "for the training of professional nutrition workers and for the special training in nutrition of general health workers who are to coöperate actively with physicians and nutrition specialists, or work under their direction."

Vitamin A Content of Lard Obtained from Hogs on a Control Ration. MARGUERITE MALLON AND MARJORIE CLARK. *J. Biol. Chem.* 54, 763–766.

These experiments reported from the laboratory of Food Chemistry, Department of Home Economics, Purdue University, were designed to determine whether vitamin A contained in the food of an animal (hog in this case) is deposited in the body fat. There is evidence that the content of the various vitamins in milk is dependent on the concentration of these vitamins in the food of the animal. Beef-fat has been found to contain some vitamin A. Daniels demonstrated the presence of appreciable amounts of this substance in samples of lard. It is possible that the lack of vitamin A ordinarily reported in lard is the result of destruction during the process of manufacture. The observations of Mallon and Clark, however, indicate that lard carefully rendered from leaves and back fat of hogs, whose diet was rich in vitamin A, does not contain an adequate supply of this vitamin to prevent xerophthalmia, even when fed in amounts as high as 30 per cent of the diet.

This is somewhat surprising since other fat-soluble substances in foods, such as carotin and the constituent of cotton seed oil which gives the Halphen test, are deposited with the fat in the adipose tissues of the body.

ELIZABETH M. KOCH.

Metabolism of the Milch Cow. Ohio Experiment Station [Wooster], Bulletin 363, 1922.

This is the fourth of a series of articles by Forbes and his co-workers reporting experimental studies of the mineral metabolism of the milch cow.

The same carefully controlled experimental procedure was followed in this as in previous work. The animals used were so selected that data could be collected during the entire reproductive cycle.

The authors had previously shown that during the period of liberal milk production, even when excessive amounts of calcium, magnesium, and phosphorous were included in the diet, there were negative calcium and phosphorus balances in every case, and negative magnesium balances in eleven out of twelve cases.

During this experimental period positive calcium balances were found in ten out of eighteen cases, all of the cows showing positive results being dry or nearly so. The data obtained furnishes good evidence of the fact that, on the winter ration used in the experiments, the cows were able to store calcium only when the milk production was low or had ceased entirely. As soon as liberal lactation started, after parturition, calcium was eliminated in such amounts in the milk that the calcium balance again became negative. This condition could not be prevented by including calcium supplements in excess in the feed.

Negative magnesium balances were found in fifteen out of eighteen determinations and eleven of the phosphorous balances were positive, the metabolism of this element paralleling that of calcium. Balances were determined also for sodium, potassium, sulphur, nitrogen, and arsenic.

The negative balances of calcium during lactation are thought to be the resultant of several factors such as the degree of the impulse to secrete milk, the power of the cow to digest, absorb, and assimilate calcium, and the ability of the cow to draw upon her mineral reserves.

The necessity for careful consideration of mineral metabolism in its relation to selective breeding is made evident. The intensive production of large quantities of mineral-rich milk makes demands upon body reserves which apparently cannot be compensated for by excessive feeding during the lactating period. A dry resting period of sufficient duration to enable the animal to restore body losses and an adequate supply of mineral-rich feed during this period are necessary for normal maintenance.

The results of these experiments are valuable because of their bearing on the subject of mineral metabolism in general.

RUTH JOHNSTIN

Course of Instruction and Training in the Dyeing and Cleaning Industry. Prepared under the direction of the Oklahoma State Board for Vocational Education in cooperation with the National Association of Dyers and Cleaners and the Oklahoma Agricultural and Mechanical College. St. Louis, Missouri: National Association of Dyers and Cleaners, Merchants Laclede Building, 1922, pp. 76. $2.25.

Professional dry cleaning and dyeing is a subject on which very little information has been given to the general public from the "inside." Trade secrets have been guarded rather jealously. Small wonder then that the average patron should feel that there was a kind of white magic about a process that without using any water removes the soil from his garments and restores at least in some measure their pristine freshness. But vocational education has changed this. In 1922 the dry cleaners and dyers of Oklahoma requested the State Board of Vocational Education to include their industry in its program. The publication of this handbook is one of the results. It represents a pooling of the experience of master cleaners and dyers, the technical knowledge of chemists, and the advice of educational experts in methods of presenting subject matter. The book is of value, however, not only to the organizations cooperating in its preparation but to others interested in the care and renovation of clothing and household textiles in an amateur way. Even many persons who make no practical use of the information will be interested and surprised to learn how many treatments must be given to the ordinary soiled garment.

Following a discussion of the term *dry cleaning*, the jobs of cleaner, spotter, dyer, bushelman, and finisher are analyzed into a definition of what each job is, what the person in that job does, and what he must know. Under this last head is included much practical information on solvents, ways of handling various fabrics, treatments of different stains, action of dyes on the common fibers, and some of the fine points of finishing. The clothing specialist will undoubtedly find this material useful, and the teacher may get valuable suggestions as to methods of presentation of subject matter.

RUTH VAN DEMAN.

Practical Polishing and Staining. By A. W. PARKHOUSE. London: Benn Brothers, Limited, 1922, pp. viii + 120.

The topics discussed in this handbook are preparation of the wood; Staining (Preliminary Considerations) and Filling the Grain; Preliminary Stages of Polishing Proper; Forming and Handling the Rubber; Preliminary Stages: "Skinning-In" and "Fadding-Up;" Bodying-In; Matching up the Colour; The Finishing Stage; Some Additional Points; The Dull of Egg-shell Finish; Fuming and Waxing Oak; Stains and Staining; More about Stains and Staining; Varnishing; Faults and their Remedies from the Dealer's Point of View; More Polish Faults; The Dealer's Part; The Staining of Wicker Goods; The Components of Various Polishes and Stains, and Purity Tests; The Treatment of Decorated Furniture; The Polishing of Floors.

The News-Bulletin of the Bureau of Vocational Information, New York, April 15, 1923, contains an article on summer work for students and teachers. This offers suggestions for those who wish to spend part of the vacation in employment for either its money or its vocational experience value.

Indiana Flour, Circular No. 109, is just off the press of the Agricultural Extension Department, Purdue University. The data compiled are largely the work of Ruth Jordan, research worker in home economics. The bulletin discusses the use of flour made from Indiana wheat.

PAMPHLETS RECEIVED

Issued by the U. S. Department of the Interior, Bureau of Education:

The Child Health School. By Lydia J. Roberts. School Health Studies No. 2.

Experiments in Pre-school Education. By Nina C. Vandewalker. Kindergarten Circular No. 10.

Health for School Children. School Health Studies No. 1.

High School Buildings and Grounds. Bulletin, 1922, No. 23.

How the Kindergarten Makes Americans. By Earl Barnes. Kindergarten Circular No. 9.

Kindergartens Past and Present. By Julia Wade Abbott. Kindergarten Circular No. 11.

List of References on the Project Method in Education. Library Leaflet No. 17.

Manual Arts in the Junior High School. Industrial Educational Circular No. 15.

Measuring the Student's Progress in Shopwork. By William T. Bawden. Industrial Education Circular No. 14.

The Organization of the One-Teacher School. By Edith A. Lathrop. Rural School Leaflet No. 10.

Public School Supervision of Employed Boys and Girls. Industrial Education Circular No. 13.

Preparation of Teachers of Manual Arts and Industrial Subjects. Industrial Education Circular No. 11.

Problems of Organization in Industrial Education. Industrial Education Circular No. 12.

Research Bureaus in City School Systems. By W. S. Deffenbaugh. City School Leaflet No. 5.

Some Important School Legislation, 1921 and 1922. By William R. Hood. Bulletin, 1922, No. 43.

Statistics of Land-Grant Colleges, Year Ended June 30, 1921. Bulletin, 1922, No. 34.

Issued by the U. S. Department of the Interior, Bureau of Mines:

Economic Combustion of Waste Fuels. By David Moffat Myers. Technical Paper 279.

Natural-gas Manual for the Home. By R. A. Cattell. Technical Paper 325.

Issued by the U. S. Department of Labor, Children's Bureau:

A Brief Manual of Games for Organized Play. By Martha Travilla Speakman. Bureau Publication No. 113.

Canal-Boat Children. By Ethel M. Springer. Reprinted from the Monthly Labor Review, February, 1923.

Child Labor and the Work of Mothers in the Beet Fields of Colorado and Michigan. Bureau Publication No. 115.

Infant Mortality. By Elizabeth Hughes. Bureau Publication No. 112.

Nutrition and Care of Children in a Mountain County of Kentucky. By Lydia J. Roberts. Bureau Publication No. 110.

Standards and Problems Connected with the Issuance of Employment Certificates. Bureau Publication No. 116.

Issued by the U. S. Department of Labor, Women's Bureau:

Women's Contributions in the Field of Invention. Bulletin of the Women's Bureau, No. 28.

Issued by the U. S. Department of Labor, Bureau of Naturalization:

How Women's Organizations May Help in Americanization Work. 1923.

Issued by the U. S. Department of Agriculture:

Corn and its Uses as Food. Farmers' Bulletin No. 1236.

Education and Research in Agriculture and Home Economics in the United States. By A. C. True.

Good Proportions in the Diet. Farmers' Bulletin No. 1313.

Homemade Apple and Citrus Pectin Extracts and their Use in Jelly Making. By Minna C. Denton, Ruth Johnstin, and Fanny Walker Yeatman. Department Circular 254.

Issued by the U. S. Public Health Service:

The Epidemiology of Botulism. By J. C. Geiger, E. C. Dickson, K. F. Meyers. Public Health Bulletin No. 127.

Issued by the State College of Washington, Extension Service:

Cookers as Labor Savers. Bulletin No. 95, January, 1923.

Milk As a Food for the Family. Bulletin No. 92, March, 1923.

The School Lunch. Bulletin No. 89, September, 1922.

Issued by the publishers listed:

Cinderella's House. The Society for Electrical Development, Inc., 522 Fifth Avenue, N. Y. City. 25 cents.

A Collation of Cakes. Claudia Quigley Murphy, 41 Union Square West, New York City. Free on request.

The Honesty Book. By William Byron Forbush. National Honesty Bureau, 115 Broadway, N. Y. City. Free on request.

House Construction that Reduces Heating Costs. By James D. Hoffman. Bulletin No. 2, Engineering Extension Service, Lafayette, Indiana.

How the Home can Cooperate with the School. The University Society, Inc., 44 East Twenty-third St., N Y. City.

How Other People Get Ahead. U. S. Government Savings System, Treasury Department Washington, D. C.

Report of the Work of the Maternity Center Association. The Maternity Center Association, 370 Seventh Avenue, N. Y. City.

Tenth Annual Conference of County and State Extension Workers. Massachusetts Agricultural College, Amherst, Mass.

School Children and Savings. American Bankers Association, Savings Bank Division, 5 Nassau St., N. Y. City.

Status of the Social Sciences in the High Schools of the North Central Association. By Walter S. Monroe and I. O. Foster. The University of Illinois, Urbana.

The Use of Different Types of Thought Questions in Secondary Schools and their Relative Difficulty for Students. By Walter S. Monroe and Ralph E. Carter. The University of Illinois, Urbana.

BIBLIOGRAPHY OF HOME ECONOMICS

PERIODICAL LITERATURE

Food and Nutrition

Baudisch, O. The Influence of Light on Inorganic Matter and Life Processes. *J. Ind Eng. Chem.*, 1923, 15:451–454.

Benedict, S. R. and Osterberg, E. Sugar Elimination after Subcutaneous Injection of Glucose in the Dog. Including a discussion of the paper on observations on carbohydrates by Folin and Berglund. *J. Biol. Chem.*, 1923, 55:769–794.

Brown, J. B. and Beal, G. D. The Highly Unsaturated Fatty Acids of Fish Oils. *J. Am. Chem. Soc.*, 1923, 45:1289–1303.

Bowen, B. D. The Relation of Age and Obesity to Vital Capacity. *Arch. Int. Med.*, 1923, 31:579–589.

Filled Milk. Ed., *Am. J. Pub. Health*, 1923, 13:310–312.

Gerstley, J. R. Dietary Considerations in Infantile Eczema. *J. Am. Med. Assoc.*, 1923, 80: 1141–1142.

Gray, H. A. A Stem-stature Index. *Arch. Int. Med.*, 1923, 31:491–498.

Henslow, G. W. Fruit and Vegetable Drying. *Food and Cookery and the Catering World*, 1923, 27:61.

Hymanson, A. and Davidsohn, H. The Saliva of the Nursling. *Am. J. Diseases of Children*, 1923, 25:302–307.

Hunt, C. H., Winter, A. R. and Miller, R. C. A Possible Factor Influencing the Assimilation of Calcium. *J. Biol. Chem.*, 1923, 55:739–742.

Kohman, E. F. Oxygen and Perforations in Canned Fruits. *J. Ind. Eng. Chem.*, 1923, 15: 527–528.

Macomber, D. Defective Diet as a Cause of Sterility. *J. Am. Med. Assoc.*, 1923, 80:978–980.

Mattill, H. A. The Utilization of Carbohydrate by Rats Deprived of Vitamine B. *J. Biol. Chem.*, 1923, 55:717–728.

Nash, T. P. Jr. and Benedict, S. R. On the Mechanism of Phlorizin Diabetes. *J. Biol. Chem.*, 1923, 55:757–768.

Newburgh, L. H. and Marsh, P. L. Further Observations on the Use of a High Fat Diet in the T[illegible]nt of Diabetes Mellitus. *Arch. Int. Med.*, 1923, 31:455–490.

Powers, [illegible]rk, E. A. and Simmonds, N. The Influence of Radiant Energy upon the Development of Xerophthalmia in Rats. A remarkable demonstration of the beneficial influence of sunlight and out-of-doors air upon the organism. *J. Biol. Chem.*, 1923, 55: 575–597.

Some Misconceptions about Hypertension and Diet. *J. Am. Med. Assoc.*, 1923, 80:1004–5.

Strouse, S. and Kilman S. R. Protein Feeding and High Blood Pressure. *Arch. Int. Med.*, 1923, 31:151.

The Care and Feeding of Infants (concluded). *J. Am. Med. Assoc.*, 1923, 80:1001–1003.

The Status of Insulin. *J. Am. Med. Assoc.*, 1923, 80:1238–1241.

Williamson, H. C. Nutrition of the New-born from the Obstetrician's Standpoint. *Arch. Ped.*, 1923, 40:253–260.

Willaman, J. J. and Olsen, A. J. The Bios Requirement of Bakers' Yeast. *J. Biol. Chem.*, 1923, 55:815–836.

Miscellaneous

Collins, T. B. Rug Making at Home. *Our Homes and Gardens*, 1923, 4:260–61.

Cupboard Space. *Our Homes and Gardens*, 1923, 4:272–73.

Danger of Arsenic in Clothing. *J. Am. Med. Assoc.*, 1923, 80:1072–73.

Earp, J. R. Odors, their Sanitary Significance, and their Elimination. *Am. J. Pub. Health*, 1923, 13:283–292.

Equipping the Kitchen. *Our Homes and Gardens*, 1923, 4:264–266.

Hampden, G. In the Style of William and Mary, A Study of the Use of Furniture of this Period in Modern Homes. *Our Homes and Gardens*, 1923, 4:258–260.

Lundsgaard, C. and Moller, E. Investigations on the Immediate Effect of Heavy Exercise (Stairrunning) on some Phases of Circulation and Respiration in Normal Individuals. III. Effect of Varying the Amount and Kind of Exercise. *J. Biol. Chem.*, 1923, 55:599–604.

Rogers, J. C. How to Choose Old Prints. *Our Homes and Gardens*, 1923, 4:256–57.

School Health Supervision (Section 7, from the Report of the Committee on Municipal Health Practice). *Am. J. Public Health*, 1923, 13:259–69.

Wyer, S. S. Dangers from Carbon Monoxide in the Home. *Voc. Educ. Mag.*, 1923, 1.

Textiles and Clothing

Cades, H. R. Conversational Colors. *Woman's Home Companion*, 1923, 50:69.

Collart, N. and Elliot, B. What Makes Color Right? *Good Housekeeping*, 1923, 76:40.

Crawford, M. D. C. Textile Trade Beset by Evil of Public Apathy. *Woman's Wear*, March, 1923.

Hunter, G. L. Brilliant Gothic Allegorical Tapestry. *Arts and Decoration*, 1923, 18:30.

Individual Clothing Plan of Filene's Helps Women Shoppers. *Dry Goods M. Trade J.*, Dec. 1922.

Lister, M. Woolen Industry in the U. S. *Am. Sheep Breeder and Wool Grower*, March, 1923.

Morehouse, E. W. Developing of Industrial Law in the Rochester Clothing Market. *Quar. J. Econ.* 1923, 37:257–290.

Teaching Color. *Ind. Arts. Mag.* 1923, 12:66.

Education

Conley, Emma. Types of Unit Instruction Sheets for Students in Homemaking Classes in Part-time Continuation Schools. *Voc. Educ. Magazine*, 1923, 1:521–522.

Fox, L. W. The School Out of School Hours. *Voc. Educ. Magazine*, 1923, 1:519–521.

Harris, Jessie W. Equipment for Teaching Home Economics in High Schools. *Voc. Educ. Magazine*, 1923, 1:442–444.

Holsopple, N. Q. Cooking Lessons for Trade School Girls. *Am. Food J.* 1923, 18, 133–138.

Jones, E. Some Problems of Adolescence. *Brit. J. Psych.*, 1922, 13:31–37.

Livingstone, Helen. The Place of Home Economics in the Part-time School. *Voc. Educ. Magazine*, 1923, 1:517–519.

McCarthy, Agnes. Home Making Education in Evening Schools. *Voc. Educ. Magazine*, 1923, 1:436–439.

Rand, W. Behavior Problems of the Pre-School Child. *Mother and Child*, 1922, 3:352–357.

Watson, A. E. Education of Parents. *Mother and Child*, 1922, 3:454–456.

Woolley, H. T. Personality Studies of Three-year Olds. *J. Exp. Psych.* 1922, 5:381–391.

NEWS FROM THE FIELD

The JOURNAL Board and the Executive Committee of the American Home Economics Association are glad to announce the appointment of Helen W. Atwater, formerly home economics specialist in the Office of Home Economics, U. S. Dept. of Agr., as full-time editor of the JOURNAL OF HOME ECONOMICS.

Meeting of the American Home Economics Association, New Orleans, Dec. 28–Jan. 2. Adequate hotel accommodations will be provided for those planning to attend. Reservations should be made early, since the city will be crowded at that time of the year. Those desiring to stay in private homes should write Miss Cleora C. Helbing, State Supervisor of Home Economics, Baton Rouge, Louisiana.

Following are the hotels in the city and the rates (European plan) and location of each:

HOTEL	SINGLE ROOM		DOUBLE ROOM		DISTANCE FROM HEADQUARTERS
	WITH BATH	WITHOUT BATH	WITH BATH	WITHOUT BATH	
The Grunewald (Headquarters)	$8.00 per day	$5.00 per day	$10.00 per day	$6.00 per day	Headquarters
The Bienville (operated by the Grunewald)	$6.00 per day	$4.00 per day	$8.00 per day	$5.00 per day	Eleven blocks
The St. Charles	$4.00 per day and up	$2.50 per day and up	$6.00 per day and up	$4.00 per day and up	Three blocks
Monteleone	$4.00 per day	$2.50 per day	$6.00 per day (2 persons)	$4.00 per day (2 persons)	Four blocks
De Soto	(Rates to be quoted later)				Four blocks

A Conference of the Committee on Living Costs, of the National League of Women Voters was held in Des Moines, April 9, 1923, in connection with the Third Annual Convention of the League. The topics discussed were as follows: Survey of the Needs of the States in the Field of Home Economics, Anna E. Richardson; Producers Cooperation as a Permanent Constructive Market Force, Professor E. G. Nourse, Iowa State College; The Packer and the Public, Mrs. Florence Kelley; Cooperative Home Building for Business Women, Emma Louise Griffith.

Miss Griffith reported on the struggle which the group of business women in New York went through before securing their cooperative apartment house on Beekman Hill. In spite of difficulties, attractive and suitable living quarters are provided at minimum cost and the eighty-odd business women are living together happily.

The program of work for the Committee on Living Costs accepted at the meeting follows:

I. Federal: Packer Control. The support of an amendment to the Packer and Stockyards Act of August 1, 1921, to restore to the Federal Trade Commission the powers and duties of which the Commission was deprived by that act.

II. State. 1. Promoting understanding of the aims, methods, and effectiveness of cooperative associations, organized and conducted in accordance with Rochdale principles. 2. Spreading knowledge of the results of governmental investigations of the coal and fuel industries.

The following is the platform adopted by the Convention for the Committee on Living Costs.

I. Federal Legislation:

1. Home Economics: The support of legislation giving enlarged appropriations for vocational education in home economics.

2. Markets: The enactment by Congress of a law in aid of local markets giving such markets the benefits of scientific information, government inspection, certification of products, and the use of railroad terminal facilities.

3. Agricultural Fertilizers: The enactment by Congress of legislation to increase the production of nitrates and other necessary chemical elements needed in agriculture by the completion and utilization of the Muscle Shoals plant, under conditions which best safeguard the public interest.

4. Support of Governmental Agencies: The continued support of all effective work of the Federal Trade Commission, the Department of Agriculture, and the Department of Justice, tending to prevent unfair acts by combinations, including open price associations which unduly increase the cost of living.

II. State Legislation:

1. To encourage genuine cooperative associations.

2. To aid municipalities in securing adequate facilities for markets, slaughter houses, milk depots, and other necessary terminals.

3. To secure sufficient state appropriations for the promotion of vocational work in home economics in day, part-time, and evening classes.

4. To forbid waste and improper hoarding of food.

5. To regulate the time foodstuffs may be kept in cold storage.

6. To prevent manipulation and other unfair practices which result in unjustifiable increases in the prices of accessories.

7. To establish efficient market bureaus.

8. To authorize state agricultural colleges to conduct experimentation in home economics.

9. To secure for each county in the state a home demonstration agent.

This platform is a matter of concern to all members of the American Home Economics Association because of its support of the legislation giving larger appropriations for vocational education in home economics, for which we are all working, as well as the scope of interests of the Committee. The Committee on Living Costs is dealing with problems of fundamental importance to the welfare of the homes of the country, and it is desirable that the closest cooperation be developed between this Committee and our Association.

Health Scholarships. The American Child Health Association has instituted a unique series of health scholarships, available for the 1923 summer session and the 1923–24 school year.

Five $1,000 scholarships and fellowships to college graduates now in service as principals or elementary school supervisors; five $500 scholarships to normal school graduates or college graduates now engaged in classroom teaching; fifteen $200 scholarships to holders of teachers' certificates, now engaged in classroom teaching. For further information address the American Child Health Association, 370 Seventh Avenue, New York.

The Home Canners Association of America will hold a meeting at Sherman Hotel, Chicago, August 3rd and 4th.

The Science of Life is a series of twelve one-reel subjects made by Bray Productions, Inc., under direction of the Surgeon General, United States Public Health Service. This film was designed as a course of visual instruction, the first ever produced covering general biology, communicable diseases, and personal hygiene. Though a course of instruction, the series also contains a popular appeal.

The American Federation of Arts, Washington, D. C., announces the following traveling exhibitions: Student Work in Color and Design from Pratt Institute and the Rhode Island School of Design, Medici Prints, Textile Designs and Fabrics, Printed Fabrics for Home Decoration, Wall Paper. Home economics departments would doubtless find these of value.

The Lewis Tea Room Institute, a new school for tea room training has been opened in Washington, D. C., by the directors of the Lewis Hotel Training Schools, under the direction of Mary Catherine Lewis. The same management operates the Lewis Bureau of Employment, for persons trained in hotel and tea room management. The Bureau has requests to staff hotels with employees, including every department head and practically all of the subordinate positions.

Education in Accident Prevention. Each year 76,000 people are killed in the United States by accident, of whom twenty-five per cent or nineteen thousand are children under fifteen years of age. For every death there are twenty-six serious injuries—nearly two million people hurt and maimed and crippled. It is not a pleasant picture and it is a shameful one when we realize that this waste of life and limb is wholly unnecessary. It can be changed, if we will. The reason for this appalling loss is largely psychological, for we as a nation have not learned to think in terms of conservation as applied to human life. The secret of preventing accidents lies in teaching the children of the country to form habits in accordance with the ordinary laws of safety and common sense. With this in view the Education Section of the National Safety Council has been working since 1919 toward the development of education in accident prevention in the public and parochial schools of the country. The plan of making safety instruction an integral part of all regular curriculum subjects was worked out and its practicability demonstrated by Dr. E. George Payne of New York University, at that time Principal of the Harris Teachers' College in St. Louis. Other cities felt the need and developed similar work along the lines followed by St. Louis, notably Detroit, Cleveland, Cincinnati, Louisville, Milwaukee and several others, and achieved remarkable results in the reduction of the death rate of school children.

Briefly the plan is this. The various phases of safety in the home, in the school, at play and on the streets are used as themes for study and discussion in each of the conventional school subjects. For example, English offers an unlimited field for work in accident prevention through reading, composition, speeches, debates, etc. Drawing has an equally extensive scope for safety teaching through posters, construction, sand-table models, scrap books, bulletin-boards, etc., and an arithmetic class can use accident statistics for their city, state or country as a basis for graphs and problems, learning meanwhile the value of keeping accurate public record of accidents so that the extent of the accident situation may be known. Civics can include the study of municipal and governmental agencies for the protection of citizens such as the Police, Fire, and Health Departments. Safety may be emphasized in geography through the study of U. S. Coast Service, the fighting of forest fires and protection from floods. Science may deal with poisons and their antidotes. This scheme involves no extra study periods and instead of being a drag on the teacher it makes her work easier because the accident theme stimulates the children's interest by relating their school work to their every day experience.

ARIZONA

University of Arizona. A cake sale was held May 1 by the second year Cookery class in the Home Economics Department of the University, as a class problem in the course. The proceeds from the sale were given to the Home Economics Club.

DISTRICT OF COLUMBIA

Home Economics Association of the District of Columbia. The first of four meetings for the year was held October 13 during the fifth annual convention of the American Dietetics Association, with the members of this association as guests. Dr. Alice F. Blood, President of the American Home Economics Association, and Annee Jewell, of Chicago, who was in Washington attending a convention of the National Restaurant Association, addressed the meeting. Others who made brief talks were, Edna White, Mrs Bryan, and Mary Sweeny, Mrs. Frizzell, President of Federated Women's Clubs, Mrs. Speel, their Chairman of Applied Education, and Mrs. Harvey Wiley, President of the Housekeepers Alliance. These speakers signified a desire to have the coöperation of our organization.

Members of the Association of Land Grant Colleges, attending an annual conference in Washington, were the guests at the November meeting. The speakers at this time were Martha Van Rensselear and Flora Rose of Cornell. Short talks were made by Mary L. Matthews, Purdue University, Mabel Wellman, University of Indiana, Connie Bonslagle of Arkansas, Bertha Terrill of Vermont, Edna Walls of Iowa, Susie V. Powell of Mississippi, Rachel Colwell of West Va., Louise Campbell of Michigan, Lydia Potter of Vermont, Anna Turley of Montana, and Lucile Reynolds of Massachusetts.

In February, Mrs. Mary de Garmo Bryan spoke of the work of the JOURNAL, and Mrs. C. E. Beecher made a report of the progress of the survey of certain canned foods on sale in the District, which is being made by the local association in coöperation with the Housekeepers' Alliance.

The March gathering was addressed by Mary E. Sweeny, Executive Secretary of the American Home Economics Association. Dr. Minna C. Denton, U. S. Dept. of Agr., presided at all meetings. One more will be held this year.

GEORGIA

The Georgia Home Economics Association held its annual meeting in Atlanta, April 19 and 20, in conjunction with the Georgia Education Association.

Topics and speakers were as follows: The Real Meaning of Home Economics in the School, the Home, the Community, and the Health Program, Mrs. Newton C. Wing, Chairman Home Economics Department, Atlanta Woman's Club, Jessie Burton, Home Demonstration Agent, Floyd County, Mrs. Ira E. Farmer, Chairman of Home Demonstration Work, Georgia Federation of Women's Clubs, and Dr. Alice Moses, Director Child Hygiene, State Board of Health; Recent Advances in Home Economics Courses of Study, Adelaide Baylor, Federal Agent for Home Economics; Recent Advances in the Field of Nutrition, Clara Hasslock, Director of Domestic Science Department, Georgia State College for Women; Home Economics in its Relation to Standards of living, Caroline Hunt, Specialist in Home Economics, U. S. Department of Agriculture; Adequate Training for Teachers of Home Economics, Emeline Whitcomb, Specialist in Home Economics, U. S. Bureau of Education; Round Table Discussion on Problems in School led by Drew Lawrence, Commercial High School, Atlanta.

The most important feature of the business meeting was the completion of affiliation with the American Home Economics Association. Plans for raising Georgia's quota of the Executive Secretary Fund were made.

The following officers were elected for the ensuing year: President, Lois P. Dowdle, State College of Agriculture; Vice president, Catharine Turner, State College for Women; Secretary, Mrs. C. J. Robston, Macon Public Schools; Treasurer, Sarah Eve, Augusta Public Schools.

Home Economics over Radio. During the past five months W S B S Station, Atlanta, has been broadcasting lectures on educational subjects, with one night each week devoted to home economics, under the direction of Clara Lee Cone, Head of Home Economics Department, Girls High School, Atlanta. Some of the out-of-town speakers who have contributed to the success of this program are: Adelaide Baylor, Federal Board for Vocational Education; Clara Hasslock, Director of Domestic Science Department, Georgia State College for Women; and Esther Bracken, Home Economics Department, University of Tennessee.

INDIANA

Demonstration Work. Home economics extension workers in Indiana have been conducting local leader schools in nutrition, clothing, and millinery. Classes have been held in 53 counties, with a total of 740 local leaders.

Three local leaders from one county report having instructed 32 women since receiving the training. A leader from another county has passed the information on to 14 women and has 14 hats, with records of cost and estimate of saving, to exhibit at the next meeting.

Farm Women Conduct a Community Market. Members of the Farm Bureau of three townships in Fountain County conduct a weekly market, in the basement of a store in a centrally located town.

A county manager was selected who serves on a price committee. This manager appointed a woman in each of the townships to solicit produce and be in charge of the table for the township. The first market was held March 24, and before 9:30 everything was sold. The committee then held a conference, decided not to open the market until 9:30, and to charge each contributor 2% of the sales to be used for advertising, paper, string, and other expense items.

Chickens, eggs, butter, cheese, bread, and cakes are in great demand. The market averages a hundred dollars a week, and has proved to be of great benefit to both the producer and the consumer. Later a definite standardization of products will be worked out.

Boys and Girls Club Round-Up was held at Purdue University, May 1–4. There were 650 boys, 593 girls, 82 men, and 44 women in attendance at this program. These people represented the boys and girls clubs of 62 counties of Indiana.

On the first afternoon of the Round-Up, the business men of Lafayette furnished cars to take the people to places of interest in and around the city. This was followed in the evening by an open house, the Schools of Mechanical, Electrical, and Civil Engineering and the Departments of Physics and of Practical Mechanics, coöperating.

On the morning of the second day some films from the U. S. Department of Agriculture were shown. After this the boys and girls were entertained in separate groups. Garment, bread, and canned goods judging contests, and a demonstration team contest were held for the girls. In each of the demonstration contests a silver loving cup was given to the winning team. Five teams of three girls each competed.

The rest of the program consisted of talks and demonstrations by the instruction and extension staff of Purdue University. The girls were especially favored by addresses by Dean Shoemaker and Mrs. Virginia Meridith, a trustee of the university.

IOWA

Iowa State College. Fellowships in the Division of Home Economics are offered in Household Art, Applied Art, Home Economics Vocational Education, and Household Science. Fellows assist in teaching and carry graduate work. Fellowships pay a salary of $540 and graduate assistants $750. A limited number of positions are available to the best qualified applicants. Applications may be made now to the Dean of the Division.

Theta Sigma Phi. Three representatives, Rose Storm, Marcella Dewell, and Harriett Schleiter, sent by Theta Sigma Phi to the national convention at Norman, Oklahoma, have just returned, full of enthusiasm

about the prospects for home economics journalism.

College League. During the convention of The National League of Women Voters in Des Moines, April 9–15, many faculty members and students attended the open meetings and Miss Sherwin and Mrs. Dietrick came to the college to help in the organization of a College League of Women Voters. During the convention an Ames dinner was held at which about one hundred and thirty Ames women were present.

The Iowa Press Club in convention at Ames was entertained at luncheon in the Campus Tea Room. Both *Omicron Nu* and the *Women's Athletic Association Council* held their annual banquet in the Campus Tea Room. These dinners are managed by students in institutional classes.

Iowa State Teachers College took an active part in the North Eastern Iowa State Teachers Association which was held in Dubuque, April 5–7, 1923. The Home Economics Division presented a program as follows: High School Dietetics, its Aims and Purposes, Minna Wilcoff, Head of the Home Economics Department, Coe College, Cedar Rapids; Teaching Sewing in the High School, Louise Adler, Instructor in the Home Economics Department, Iowa State Teachers College, Cedar Falls; Methods of Grading Home Economics Pupils, Frances Johnson, High School, Vinton.

The meeting was well attended; over 50% of the counties in this section were represented. Membership in the State Home Economics Association was urged.

The first year home economics students entertained the second year students at a Colonial tea at the end of last term.

Second year students will give a get-together banquet to promote good fellowship and esprit de corps.

MISSOURI

The Missouri Home Economics Association met in Columbia, May 4th and 5th, with a representative attendance from all parts of the state. The principal subjects of discussion were the program of the American Home Economics Association by Edna White; problems in curriculum construction by Dr. J. L. Meriam, University of Missouri, and various superintendents and state representatives of home economics; the nutrition program by representatives of different nutrition agencies. As a result of this a committee was formed to work out a nutrition program for the State. On the last afternoon Edna White presented the work of the Nursery School of the Merrill-Palmer School in Detroit.

It is hoped that the membership of the Missouri Association will reach the 150 mark before the Chicago meeting.

NEBRASKA

Nebraska Home Economics Association sent out a questionnaire to teachers in the state with a view to determining the teaching load. The answers will be used to indicate what needs to be done to promote the best interests of home economics in the state and to secure a reasonable teaching schedule for every home economics teacher. A copy of the questionnaire may be secured from Leta B. Linch, Nebraska Wesleyan University, University Place.

NEW ENGLAND

At the meeting of the **New England Home Economics Association,** arranged by the Homemakers' Section for April 14, 1923, Mrs. C. F. Whiting told of her sixteen years' experience in employing household labor on the principle that it deserves and requires the same democratic basis as other labor. Starting with one employee for a family of three, Mrs. Whiting now employs, for a family of eight, two women each for a forty-eight hour week. The first works daily from 7 a.m. to 11 a.m. and from 1. p.m. to 6 p.m. except on one day when she works from 7 to 1, and Sunday, when she works from 8 to 3. The second works from 10 to 8 except one day when she works from 10 to 2, and Sunday from 10 to 2. These hours include, in addition to the weekly forty-eight, one hour per day for meals and three hours per week for laundering house uniforms.

The homes of prospective employees are visited for a knowledge of moral and sanitary

conditions, a dressing room is furnished in the employer's house where street clothes are changed for washable uniforms, a physical examination with a doctor's certificate is required, two weeks' sick leave with pay is given each year if required, and two weeks vacation at the end of each year's service.

The wage of $16 weekly (paid by Mrs. Whiting, plus 2 meals daily) is the minimum for the hotel and restaurant women workers of Massachusetts.

The expense has proved no greater than with the living-in system but it has been necessary to sacrifice certain services of specialization, to study changing conditions, to manage thoughtfully, to sacrifice personal service.

The workers appreciate the dignity of their position, the systematic work, their independence, and in return give intelligent service.

Mrs. Whiting feels that, while her plan helps to solve the problem of the decreasing supply of household workers and to counteract the demand for wages out of proportion to efficiency or work required, she has found her greatest satisfaction in the knowledge that she is working on a right social principle.

Members of the Association who are interested in nutrition were delighted with the attitude taken by Dr. Wallace Seecombe of the Royal College of Dental Surgeons, Toronto, in his paper on "Diet and Teeth with Special Reference to the Prenatal and Nursing Period," given before the annual meeting of the Massachusetts Dental Society in May.

NEW MEXICO

State College Tea Room. A feature addition to the New Mexico College of Agriculture and Mechanic Arts has been the opening of the tea room in the Home Economics Department.

The work is conducted under the direction of Blanche Gillmore, Professor of Home Economics. The sophomore girls, of the class in meal planning and serving, plan all the meals and do the marketing, each girl taking complete charge for a week at a time. Cooking is done by the girls only in their regular class periods. A trained cook is employed for all extra and routine work.

The tea room serves the two-fold purpose of affording training for the girls of the home economics department and supplying an ideal place for the junior and senior boys to take their meals, being open only to upper classmen at present. The charge of $25.00 a month per person covers all expenses.

NEW YORK

The Home Economics Association of Greater New York held a luncheon meeting, April 28, at Hotel McAlpin. The program was as follows: The American Home Economics Association, Mary Sweeny, Executive Secretary; The Responsibility of Women for the Permanency of the American Dye Industry, Dr. Charles Herty, President of the Synthetic Organic Chemical Manufacturers' Association of the United States.

Camp Cookery. At the beginning of the fall term in the high school at Middletown, one of the boys suggested to Mary Hunt, teacher of home economics, that he would like a course in camp cookery. The suggestion was enough to arouse the interest of several other boys, and soon a class of seven was organized. There were others who desired to take the course, but the arrangements of their schedules made it impossible.

The class met for two double and one single period a week for one term. Although none of the work was done out-of-doors over an actual camp fire, such foods were prepared in the school laboratory as are suited for camp fire cooking.

There were lessons on vegetables, soups, cereals, beverages, such simple desserts as may be used in camp, eggs, meats, and breadstuffs.

The boys planned meals for camp and prepared them in class. They were interested in the work, and several tried out their skill at home for the benefit of their families.

Courses for Students and Teachers from Foreign Lands are offered by the International Institute, Teachers College, 1923–24.

It is not the intention or purpose of the International Institute to segregate the students from foreign countries, but rather

to lay a general foundation which will place them in a position of equality with the American student in relation to the courses regularly offered by the College.

Accordingly the following courses will be offered: an introductory course on the meaning and significance of American ideals and institutions, and on their historical, social, and political features; a fundamental course on American education, organized with particular reference to the needs of foreign students; a supplementary course which will give the foreign student an opportunity to become acquainted, by actual visitation, with typical American schools, their organization, curricula, methods, and problems. Further opportunities for a broad preparation in current ideals, philosophies, and systems of education are offered in courses on foreign school systems and on the particular needs of backward races.

It is hoped from these courses that the foreign students will be in a better position not only to appreciate and evaluate American and other educational systems but also to exercise discriminating judgment rather than the imitative instinct in applying modern scientific principles to their own particular sphere of professional service.

OREGON

Well Babies Clinics in Portland are starting on their third year. These clinics are fundamentally nutrition clinics, primarily for the well baby, and their object is to teach the mothers how to feed and care for their babies so that they will continue to be well. Mothers are advised as to the diet for themselves if they are nursing mothers, and also as to the diet for the baby. The main object is to teach the "gospel of breast milk," and these clinics are unique in the fact that at the end of nine months there is a larger percentage of breast-fed babies than at three months. Mothers are taught to realize that the diet of an overnourished baby must be watched just as carefully as that of the undernourished, and that a fat baby is not necessarily a healthy one. They also learn how to prevent the development of rickets.

These clinics are under the direct supervision of Dr. C. Ulysses Moore, and the work is carried on through the assistance of the Visiting Nurses Association. Any mother living within the district is allowed to bring her baby until he has completed his second year. There is no charge. The nurses, after obtaining a record from the city health office, visit all the homes in the district where there is a new-born baby, and after telling the mothers about the clinic give them appointment cards. It is desired that babies be brought to the clinic before they are six weeks old. Every home is visited at least once a month and the nurses teach the mothers to carry out the doctor's instructions. The babies are usually brought to the clinic once a month up to the first year.

If the baby is being breast-fed, the mother's breasts are examined. Her own diet is fully discussed and, unless some specific factor is lacking, she is merely given a copy of some sample diets, especially prepared for the nursing mother, and is instructed in regularity of feeding the baby.

If, however, the baby has been weaned within a period of six weeks when entered, the task of reestablishing the flow of breast milk is begun. During the period of increasing the flow of breast milk, the baby is partly bottle-fed. When a sufficient amount of breast milk is obtained, the baby is taken off the bottle entirely.

Although the babies are kept on the breast at least nine months, other foods are gradually added to the diet, beginning with orange, tomato, or cabbage juice at the third month. Solids are gradually given from the sixth month, beginning with well-cooked cereals, then broths, toast or zwieback, vegetable purée, cooked fruit, and a little baked potato, until by the twelfth month the baby is completely weaned. After this time the baby is generally put on a "one to seven" diet (one calorie of protein to each seven calories) which is carefully worked out in each case by the dietitian. In certain cases, special diets are worked out by the dietitian upon the recommendation of the doctor. Great stress is laid upon the importance of whole-grain cereals and succulent vegetables in the diet of both mother and child.

SOUTH CAROLINA

The South Carolina Home Economics Association held its spring meeting in Columbia, April 14. Annie E. Sale, Nutrition Specialist of the Extension Department, Winthrop College, gave a talk on The Proper Feeding of Children. Mrs. B. L. Parkinson of Columbia presented the homemaker's need of putting first things first. Alice Foote, Head of the Department of Home Economics, Winthrop College, spoke on How to Make Economics Work Function in the Home Life of the Child. Mary E. Fraser, Director Home Economics in mill village work, Rock Hill, emphasized the spiritual values of home economics in social work.

Sarah Gilman, Head of the Home Economics Department, Columbia High School, was reelected president of the association. The other officers are: Vice president, Mrs. S. O. Plowden, Dalzell; Secretary, Meta De Loache, Columbia; Treasurer, Blanche Tarrant, Winthrop College; Councilor, Lillian Hoffman, Columbia; Alternate Councilor, Sarah Gilman.

The association decided to establish a home economics scholarship in some college in the state. Mrs. Harriet F. Johnson was appointed chairman of this committee. A committee was appointed to make a state survey of home economics work.

TENNESSEE

University of Tennessee. The senior class has been able this year to carry out some practical problems under the direction of Esther Bracken, in coöperation with the nutrition worker in the city schools.

Some of the girls have had special problems with underweight children, and a special class, in which advice was given as to general health habits, particularly diet.

Other girls have gone into the homes of underweight children, and helped the mothers with both selection and preparation of food.

This work has given the students an opportunity to put their knowledge of nutrition into practical use in a most vital manner.

A series of talks on various phases of home economics have been given once a week this spring, from the radio broadcasting station at Knoxville. The program which is in charge of Esther Bracken was started, with a number of talks on various phases of nutrition. Other members of the Home Economics Department have also taken part in the program. Ruby Hitch gave a series of lectures on the selection of clothing, and Kate Slightam on household management and buying.

We believe these lectures have been the means of interesting many people in the importance of home economics.

TEXAS

College of Industrial Arts, Denton. "Better Food Week," a campaign to interest the students in better eating habits, was observed at the College, April 10–14. The girls ordinarily eat too much meat, potatoes, and sweets. They care very little for vegetables and take milk only in small amounts. The campaign was opened with publicity in the college paper and the exhibition of a miniature Healthland worked out by the Manual Arts Department. Attractive posters in conspicuous places, dogers on the tables in the dining rooms, the showing of a milk film, and an assembly program by students of the Home Economics Department were other features. The posters and little dodgers on the tables, setting forth the value of fruits, vegetables, and milk as aids to health and beauty, attracted the most attention. The college hopes to make "Better Food Week," an annual affair, so responsive were the students. Many ideas were obtained from the literature of the American Child Health Association.

UTAH

Executive Secretary Fund. On the appointed day, May 1, there went forward from the Utah State Chairman for the A.H.E.A. Executive Secretary Fund, the sum of $111.20, or ten per cent more than the contribution suggested by the National Chairman as Utah's share for 1923. Those who have joined in carrying Utah over the top again take considerable satisfaction in the achievement.

This professional cause has been supported by contributions from the following: staff members and students of the University

of Utah, Brigham Young College, Weber Normal College, Utah Agricultural College; Utah State Home Economics Supervisor; high school home economics teachers; Home Economics Club, and Kappa Chapter of Phi Upsilon Omicron in Utah Agricultural College.

Money-earning ventures provided the sums given by the student organizations of the Utah Agricultural College. The gift of $20.00 from the Home Economics Club came from a candy sale. Kappa Chapter of Phi Upsilon Omicron made its $40.00 out of the profits from two luncheons served and from the sale of home-made fruit ices and cookies. Wherever students' effort has shared in this work the benefit must be measured not alone in terms of money turned into the fund, but also in terms, first, of the pleasure and training which are always features of cooperative effort, and second, in the value of students being introduced thus early to their professional organization and in their starting to develop while yet in college a professional attitude of mind.

WASHINGTON

Washington Home Economics Association.—The spring conference was held at the Home Economics Building of the University of Washington, April 21, the president, Ruth Moody, presiding over the following program: Health Questions in Relation to the Home and to Home Economics, Mrs. Nell Kantner, Everett; discussion, Zaidee Bonney and Helen Miller, Tacoma; Relation of Home Economics to the Community—Community Viewpoint, Mrs. Canfield, Seattle; Has Home Economics Helped? Mrs. Sperry, Seattle; Teacher's Viewpoint, Marie Mendenhall, Everett; Impressions of an Eastern Visit, Mrs. Dabney, Seattle.

Florence Harrison was appointed Alternate Councillor for the annual meeting in Chicago.

Miss Raitt announced a summer course in Public Health to be given at the University by the Departments of Sociology, Nutrition, Physical Education, and Nursing.

Luncheon was served to eighty at the University Commons.

WISCONSIN

The Wisconsin Home Economics Association, organized in 1921 under the leadership of Helen Goodspeed, has completed affiliation with the American Home Economics Association. The present officers of the Association are: President, Margaret Johnston, Supervisor of Home Economics, State Board of Vocational Education; Vice-president, Bernice Dodge, University of Wisconsin High School; Secretary-treasurer, Loretto Reilly, Supervisor of Home Economics, Madison.

During the past year the work of the association has been carried out under the direction of the following committees: Executive Secretary Fund, Course of Study, Texts and Reference Books, Present Status of Home Economics in Elementary and Secondary Schools of Wisconsin, Social Agencies, Membership, Institution Management, Program.

Cooperation with other state activites has been secured through women's clubs, social workers, school superintendents. Five home economics clubs have been organized by the teachers throughout the state. The chairman of each club is a member of the executive council of the state home economics association.

WYOMING

The Home Economics Association of Wyoming affiliated with the National organization in March with a membership of thirty. While this may seem small, it represents 60 per cent of the home economics workers in the state.

University of Wyoming. Home Economics Day was celebrated May 15th by a program planned by the Home Economics Club.

The assembly hour was given over to a one act skit, "Relative Values," written by Florence Kisor, a junior in the department. The afternoon program consisted of a reception and an exhibit of work from the clothing and nutrition classes.

Stella Mather, formerly State Home Demonstration Leader for Nebraska, is in charge of the teacher training work at the

University. Bess Chappel who formerly held this position is doing clothing work in the Normal School at San Jose, California.

FOREIGN

Native Training Institute, Clixby Estate, Kafue, N. Rhodesia. In acknowledging material received from the Association Office, Rev. J. R. Fell, in charge of the Institute, writes: "I thank you for the names of others who you think will be willing to furnish pamphlets and bulletins which we can adapt to our own work. Our native people in Rhodesia are very primitive so that we are compelled to adapt all material which we gather, and yet fundamentally the needs are very much the same. Some of the subjects in which we must give training are: cooking of such native foodstuffs as maize, millet, sweet potatoes, peanuts, cassava, pumpkins, melons; sanitation; building of better homes; furnishing homes; pottery, weaving, spinning, basketry; laundry work and soapmaking; hygiene and simple home remedies; child rearing." Material that will be of value in this work may be sent directly to the Institute.

Visitor From Germany. Alice Salomon, principal of the School for Social Work, Berlin, Germany, recently visited Teachers College on the way to the Social Workers' Conference in Washington. Miss Salomon has been for a number of years Vice-President of the German National Council of Women and is at present Vice-President of the International Council.

Home Economics Department in Canton, China. The new home economics department of the True Light Middle School has a laboratory and class room. Jean MacPherson, in charge of the department, describes it as follows:

The center room makes an attractive class room. Because this house is temporary we did not buy very expensive equipment. We have used Chinese mosquito netting for curtains, the tables are made of bamboo with a shelf for the dishes. The tops of the tables are of wood which can be scrubbed. We were very fortunate in being able to buy a cupboard with sliding glass doors and a large storage cupboard with deep shelves, a set of shelves which we are going to use for uniforms, and another smaller cupboard with a zinc top; so we are well off for storage space. There are two oil stoves which are being painted and put into shape. Each little desk has a bamboo stool which fits underneath. A movable blackboard completes the present furnishings.

The problem of a sink is perplexing at present, for there is no opening to the outside; but I think we will have to plan a drain to carry off the waste water, as it makes a great deal of carrying to have all the dishwater brought in pails.

In the desks we have chop sticks, white bowls for mixing, a rice bowl, Chinese teacup and small saucer. We bought glass jars of three sizes for dry groceries, flour, sugar, etc., which we have on hand. We will label them in Chinese characters later and also acquire some tins for containers. At the end of the porch nearest the servants' quarters is a small space screened off with a table and basins for the girls to wash their hands before coming to class. I have an *amah* who lives here and takes care of my room and helps in the care of the house. It seems a very satisfactory arrangement. . . . .

Our dinner the other night was a great success. The little third year girls did themselves proud and I was pleased to find how many classes had contributed something to the dinner. The home management class made the fireless cooker, the seconds furnished the sweetpeas from their gardens, the third year primary drawing class designed and made the nut baskets and place cards, and the sewing class made the little linen napkins and laundered them for the occasion. Of course they made little mistakes but because it was the very first time they had served a foreign meal they could not be expected to know all the fine points. It was great fun getting ready for it and the guests were pleased with the effort.

Home Economics and China. *The True Light Y.W.C.A. News Letter* publishes this article by Lei Kin Tsuen, nine years old, Fourth Year Middle School:

Last summer I was not very busy so I had a restful time. Sometimes I went to visit my friends and neighbors some of whom were working hard to earn their living. As I talked with several women they were very sad and said, "We have no happiness in our lives because most of our children died in babyhood." When I heard that, I asked them how they treated their babies and whether they fed them and nursed them carefully. They said that they had not known how to take care of their children because nobody had taught them.

When I looked around their houses, they made me feel uncomfortable because the furniture was poor and the children were dirty and their eyes were often full of tears. I never saw such unhappy childhood as those children had, for they ate hard rice and drank impure water. The children were sick most of the time. They played on dirty streets. The air was dusty and impure so their faces were pale.

In one of these houses I saw some idols which the people were worshiping. The house was full of smoke and bad odors. The women were weaving and some little girls were spinning. A little child was sitting on the ground playing and nobody took care of him.

After I had talked with the poorer people, I went to visit some rich families. Their houses were very beautiful and clean but they also worshiped idols. The children seemed very happy, but they too were very weak because their mothers did not take proper care of them.

As I study more about our Chinese customs and homes, I am very much disappointed because our children are not getting the right training in the homes. Every family should train its children to be strong, good citizens.

We have heard many times many people talk about the problem of how to make society better and how to produce a healthy generation. The best way to improve society is to reform families. We all know home education is very important because it develops the character and mind of the child. The beginning of the life of a child is at home. The mother takes the place of a teacher to her children. Homes spread and hand on customs, language, religion, civilization to the next generation. Those are very important things upon which society depends. So the first thing to do to reform society is to give mothers general knowledge of domestic things in order to help them to make good homes and rear healthy and good citizens for society. Then we can have hope for a new and better China.

Miss Nadine Geitz of Moscow, Russia, is in America to consider special study this fall for the public health work which she hopes to do in her own country later.

Miss Hansa Mehta, daughter of the Prime Minister of Baroda, India, has been spending some months in America studying education for women. She comes here from England, where she went after her college work, for further study and for observational visits in schools and colleges. Plans are being made for a new college for women in Baroda and Miss Mehta will be the administrative head.

Miss Stael von Holstein from Sweden, who has been spending the past two years studying in America, has been invited to represent her country at the World Conference in California and also at the meeting of the A. A. U. W. in Portland. She studied at Teachers College, under the Scandinavian American Foundation in Stockholm.